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Mississippi State Medical Association
and the
Mid-South Postgraduate Medical Assembly

W. H. ANDERSON, M.D., Editor-in-Chief
MILDRED P. ANDERSON, Assistant Editor

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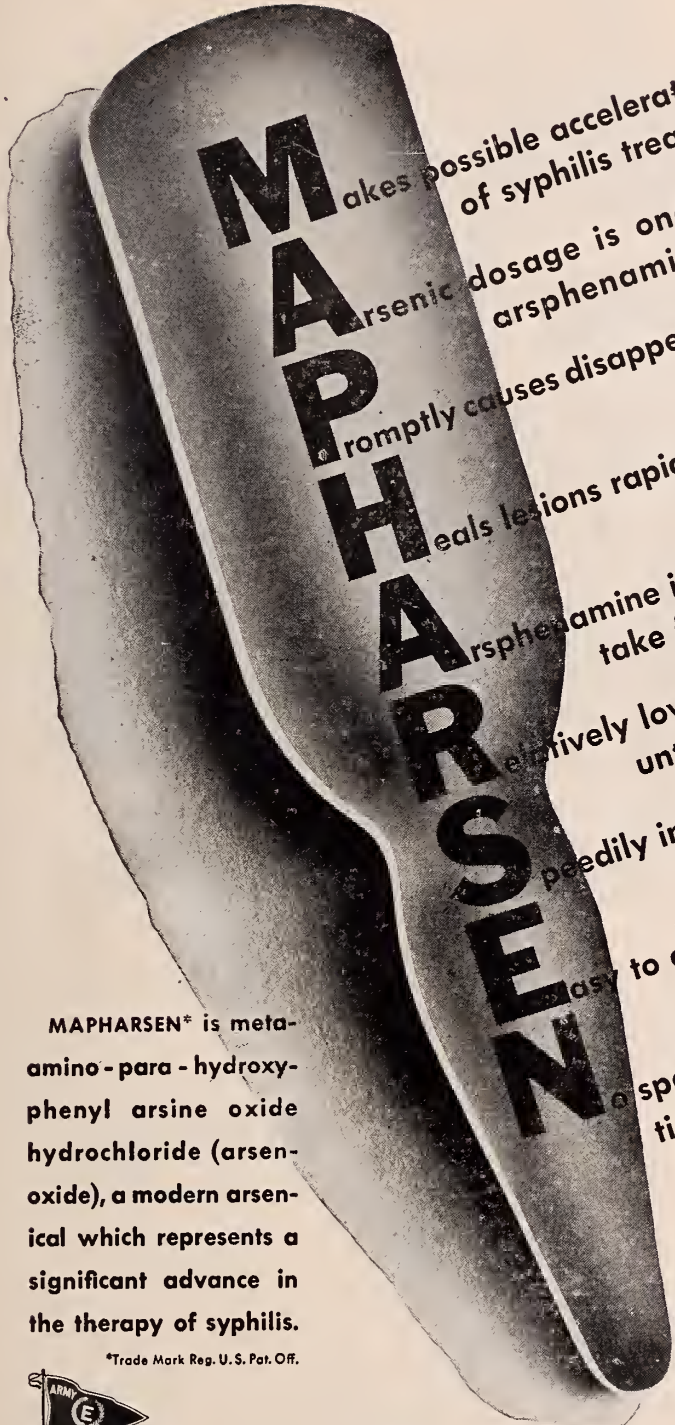

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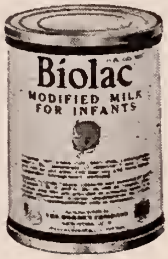

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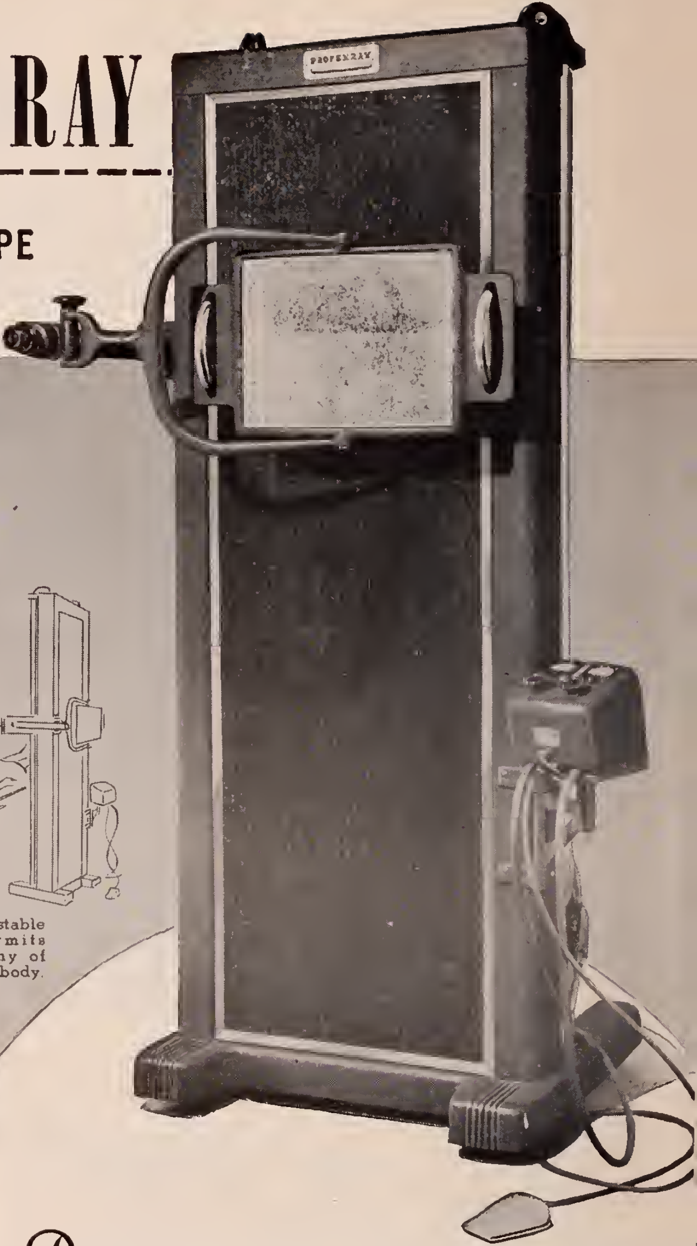

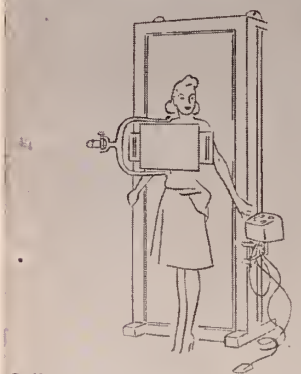

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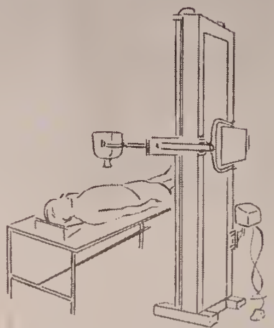

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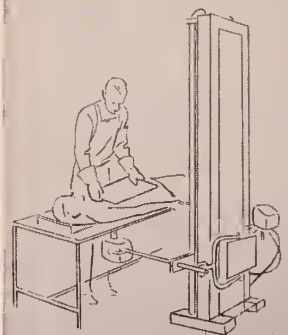

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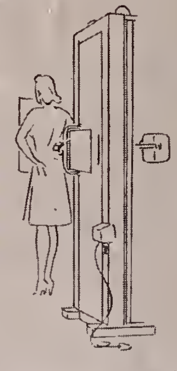

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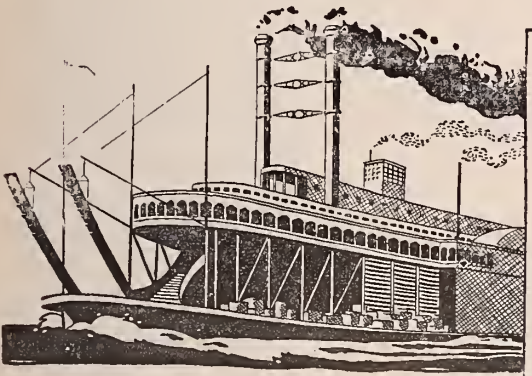

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[1] *Jl. Clin. Endocrinology* 3:648, Dec. 1943.

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*WOLDMAN, E. E., and POLAN, C. G.: The Value of Colloidal Aluminum Hydroxide in the Treatment of Peptic Ulcer; A Review of 407 Consecutive Cases, Am. J. M. Sc. 198: 155-164 (Aug.) 1939.

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Coronary Artery Disease*

Guest Editorial written by L. C. Sanders, M.D.
Memphis, Tennessee

Disease of the coronary arteries ranks first in importance as the cause of death among business and professional men. The day laborer, although his arteries may become as hard as pipe stems, rarely dies of coronary occlusion. Diabetes, hypertension and syphilis are contributing causes, but there are other factors, such as heredity and, in particular, the wear and tear of the strenuous American business life, which are more often influential than pre-existing organic disturbances.

Since coronary disease attacks men in the prime of life, when they are at their busiest, trying to hold the wealth or reputation which they have spent years in making, it behooves us to be on guard for the first evidence of this condition.

The clinical manifestations are visible, depending upon the extent of involvement of the coronary circulation. In the beginning, the patient experiences no more than a mild uneasiness in the substernal region, a tightness in the chest, or a choking sensation on unusual exertion. On the other hand, an attack of violent chest pain, with radiation down one or both arms may be the first symptom. It is believed, however, that most patients have some precordial symptoms prior to the severe pain of coronary occlusion. It is of the greatest importance to recognize these early symptoms, for only by their prompt recognition can measures be instituted to prevent permanent disability or sudden death.

Physicians must realize that distress in the chest induced by unusual effort means coronary artery disease unless proved otherwise. In the early stages, physical examination of the heart or the electro-cardiogram may show no variation from the normal. Only after occlusion of a coronary branch are the characteristic electrocardiographic findings revealed. in the vast majority of cases, the history is the most reliable guide to the diagnosis, and for this reason the physician should question the patient carefully with regard to any symptoms which point to a subnormal heart capacity.

The treatment of coronary artery disease varies according to the degree of cardiac damage found at the patient's first examination. In the early stage, characterized by the so-called angina pectoris syndrome, the treatment is directed toward the protection of the heart whose blood supply is inadequate to permit its ordinary function. It is absolutely necessary, so far as possible, to estimate the heart capacity. If the patient can do a certain amount of work without pain, he is within his heart capacity. The index to the heart capacity, therefore, is that amount of exertion or emotion which does not induce cardiac distress. Patients should be instructed to refrain from exertion, emotion, or any other factor to a point which causes distress.

Plenty of sleep, shortening of working hours, a daily noon rest period, a simple diet, and avoidance of the worries and harassing incidents of daily living will go a long way toward maintaining a normal cardiac reserve. Drugs are rarely indicated and few are beneficial. Nitroglycerine, gr. 1/200, beneath the tongue when the cardiac pain is not relieved by rest is often useful.

The second stage of coronary artery disease is characterized by occlusion of a coronary management of the early stage. When coronary occlusion occurs, the treatment is directed, first, toward relief of pain; second, control of shock; and third, future protection of the heart.

Pain is the outstanding symptom. Its distribution is in the chest, the upper abdomen, one or both arms, the neck or jaw. Or, the patient may have a violent choking, accompanied by a sense of impending death. The nature of the pain varies from a prolonged distress to an agonizing, tearing, boring or constricting sensation. Its duration depends upon the extent of the infarct and the measures adopted for its relief.

Morphine sulfate, gr. $\frac{1}{4}$ to $\frac{1}{2}$, has been widely and successfully employed. Recently, Papaverine, gr. $\frac{1}{4}$, has been given, with gratifying results; this is a powerful vasodilator and is said to aid in preventing ventricular fibrillation and to limit secondary vasoconstriction. Morphine or papaverine should be given freely and as soon as possible, to control the pain, as pain increases shock and, if prolonged, adds to the danger of complications, such as enlargement of the area of infarction and further weakening of the myocardium.

Shock should be controlled as rapidly as possible. Aminophyllin, gr. 3-¾, given intravenously and very slowly is one of the best drugs available. It may be administered at four-hour intervals until the shock has subsided.

Oxygen still remains our best weapon for combating respiratory distress. In hospital practice, the oxygen tent is advisable, but in the home a small portable oxygen tank with nasal catheter attached can be used satisfactorily at the bedside.

When the heart muscle is failing, digitalis is most effective. It's use may be continued as long as necessary.

The usual cardiac stimulants, such as coramine and metrazol, should be avoided, since they raise the arterial tension and increase the load on the already over-burdened heart.

When the attack subsides, the real task of the physician begins. At the outset, the patient and his family should be told exactly what has happened to his heart. Frankness on the part of the physician paves the way for the long rest period which must follow.

The patient should remain constantly in bed. The duration of this period depends upon the seriousness of the heart damage and the condition of the patient during the first two weeks following the attack. Four weeks of bed rest is the minimum, and in some cases as much as eight weeks is advisable. Physical and mental rest are of vital importance. Sedatives are indicated to promote rest and sleep. Visitors should not be allowed.

The diet should be simple, but ample to build up the patient's strength. If the patient is over weight, dietary restrictions should be imposed.

When the patient is ready to sit up, not more than five minutes should be allowed the first day, the time being increased five minutes each day. When strength has returned and the cardiac reserve is ample, light work may be resumed, with short hours and daily noon rest periods.

If this program is carefully and faithfully followed, the majority of patients with coronary artery disease may continue to enjoy a useful and comfortable existence for many years.

Every Human Being a Dual Person*

G. S. BRYAN, M. D.
Amory, Miss.

NOT in the sense of Dr. Jekyll and Mr. Hyde but everyone is a dual person; one personality is psychic, the other somatic. Since this is true there are two types of illness and there should be two types of therapeutics. if every doctor knew or realized this and all medical schools taught this, there would be no need or excuse for this paper. But I am convinced that the crying need in medicine today is a full knowledge and realization of the truth set forth in my title above.

Early in my professional life, although I had had but scant teaching along this line, I realized the subjective symptoms presented by many people seeking medical treatment have no physical pathology that could possibly give rise to them. Realizing this, I reached the conclusion that these people are malingerers, pure and simple. Hence, I either dismissed them with no treatment or, worse still, I gave them some kind of placebo. In either case the individual seeking medical advice received no benefit, but on the other hand was made worse. This caused me to feel that I was a poor diagnostician. Feeling that this was true, I began to treat my patients "symptomatically." Picture my confusion when I found that each time the patient returned new symptoms and complaints were mentioned. In fact, if time enough were given, endless symptoms and complaints would be developed at a single sitting. I might note in passing that when I began there were few surgeons and would-be surgeons. What a change has come over this scene! And when this change did come it was perfectly natural that these cases should drift into the hands of these miracle workers.

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*Read before the Northeast Mississippi Thirteen Counties Medical Society West Point, Miss., March 1944.

What crimes have been wrought under the cloak of ignorance! Had I realized, as I now do, that most of these patients were victims of psychic illness, I think I might have been of real help to some of them and I feel that I should have fewer pangs of conscience. There is little that I can bring this group of doctors that will be of benefit to their patients, but I do emphasize the rewards of digging into the intriguing subject of psychiatry.

If these physically sick people were but seldom seen it might be of little concern to us, but these cases are so numerous and wrong treatment is so disastrous, we can not escape the responsibility that rests upon us. A statement recently made by Alvarez is startling: "In more than sixty per cent of people who consult doctors, the trouble is wholly above the ears." By this he means that more than sixty per cent of people who consult doctors are psychically sick. If this be true (and I think it is) how foolish it is to give them drugs or submit them to surgery. Again, Weiss sums the matter up in this way: "Every two hundred cases presenting themselves for treatment may be divided into three classes, in class one thirty-five per cent should be placed; in class two another thirty-five per cent; and in class three the remaining thirty per cent. Those in class one are purely psychic; those in class two have a mixed pathology, that is, there may be found some departure from normalcy in a somatic sense in addition to a psychic twist and in these cases it is doubtful if the departure from physical normalcy has anything to do with illness or subjective symptoms." This leaves a scant thirty per cent somatic pathology without any evidence of psychic illness.

In the face of these facts, what is our duty to ourselves and our clientele? It appears that we are faced with the imperative duty to increase our psychiatric knowledge. And by all means we should demand that our young men who are to be entrusted with the health and happiness of the public should be thoroughly instructed in psychosomatic medicine. In addition, much teaching along these lines should be done in our public schools and in our homes.

Mesentric Vascular Occlusion*

L. B. OTKEN, M. D.
Greenwood, Miss.

IN REPORTING THESE two cases, I do so desiring to add to the cases reported in medical literature. It is my opinion that we learn from our own mistakes, that our failures impress us more than our successes.

In the **International Surgical Digest** of August 1935, Boyce & McFetridge from the Department of Surgery of the School of Medicine of Louisiana State University, review the literature on the subject of mesenteric vascular occlusion. Let me quote briefly from part of their review: "The condition was first described by Tiedman in 1843. Trotter in 1913, reviewed 366 reported cases.

Incidence—New Orleans Charity Hospital —13 cases in 300,000 admissions. Boston City Hospital—57 cases in 33 years. Massachusetts General Hospital—13 cases in 12 years. Lankeneau Hospital—2 cases in 30,000 admissions.

"Although the condition has been recognized for almost a century, not more than twenty per cent of the cases are diagnosed prior to operation—another fifteen per cent are not diagnosed until autopsy and the mortality still runs from fifty per cent to ninety per cent.

"Etiology—The etiology of mesenteric vascular occlusion in at least a quarter of all cases is not evident at all, most often the predisposing or actual cause being some disease of the circulatory system, such as endocarditis, atheroma of the aorta, aneurysm, phlebitis, stasis of portal system or arterioclerosis, which may be primary in the mesentery but more usually is primary elsewhere. It may follow injury to the abdomen.

"Pathology—Mesenteric vascular occlusion is considerably more frequent in the arteries than in the veins. In ninety per cent of all cases the occlusion occurs in the superior mesenteric artery and vein, where it is always more potentially dangerous than it is ni the inferior system. This, of course, is due to the fact that the superior mesenteric artery supplies the distal portion of the duodenum, all of the jejunum, all of the ileum, the right colon and the transverse colon to the splenic flexture.

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*Read before the semi-annual meeting of the Delta Medical Society, December 1943.

"Diagnosis—The problem of diagnosis as Dump and Zollinger say, is often not a question of mistaken diagnosis, but of no diagnosis at all. The typical case of mesenteric vascular occlusion is rarely seen. The symptomatology suggests half a dozen different diseases. The pain is likely the pain of pancreatitis in that it tends to persist after morphia, just as it persists after enemas and after decompression of bowel. The localized tenderness of appendicitis is absent, as are the rigidity of perforated ulcer and the visible peristalsis and early distention of acute intestinal obstruction.

"Treatment—Resection is the only feasible procedure."

CASE REPORT

Mr. A. C., White, Age 50—Farmer, brought in by Dr. L. H. Hightower, Itta Bena, Mississippi, who gave the following history:

First seen early in the morning of May 16, 1935. I found him suffering with pain in gastric and epigastric regions. He gave a history of indigestion over a period of years, with an attack of flu several weeks previously. History otherwise negative. Patient said that the night before he ate a hearty supper of fried ham and cooked onions. Patient's temperature was normal, pulse slightly accelerated. No special rigidity of abdominal muscles. No vomiting up to the time of first visit. Patient was suffering so severely he was given a hypodermic of morphine. Pain subsided and did not return. On visit in afternoon occasional vomiting was reported, with moderate amount of blood in vomitus. No effort made to move bowels on account of hemorrhage. On second day patient was fairly comfortable, except for occasional vomiting. Temperature normal, pulse around 80. No rigidity and very little distention. On third day, vomiting had fecal odor. His condition was not so good and it was evident that he had an intestinal obstruction or paresis, and it was then that he was finally prevailed upon to go to the hospital.

Patient was admitted to hospital about 3 A. M. When seen by me shortly after admission, he had a temperature of 98 degrees. Pulse 118. Respiration 26. Very little distention of abdomen, generalized tenderness over entire abdomen. He had not vomited since admission.

With history of no previous abdominal operation or anything else that would localize an obstruction and in view of the fact that the patient was not suffering acutely, I decided to wait until morning, when I could have laboratory work done and possibly x-rays to determine point of obstruction. At 8 A. M. the hospital called, saying patient was worse, with rapidly rising pulse. When I saw him in a few minutes he presented quite a different picture from that of 3 A. M. Distention was no greater, patient was restless, pulse was 130, and facies was that of a man in extremis. W. B. C. was 14,000, polynuclear 86%, urine negative.

I carried to operating room and under local anesthesia did a high enterostomy. Patient left table in poor shape, and in spite of glucose and other measures, died about 10:30 A. M. I finally received permission from the family to open the abdomen to find cause of death.

On opening abdomen I found the entire ileum and part of jejunum black and gangrenous. There was a moderate amount of fluid in abdomen. The superior mesenteric vessels were both occluded—the cause or source of occlusion was not determined. The mesentery was a thick, black, doughy mass. There were no adhesions. It is doubtful whether an early diagnosis and surgery would have saved this patient, due to the fact that all of the ileum and part of the jejunum were involved.

CASE II

B. W. K., White Male, Age 16—Patient was first seen by Dr. Ira B. Wright, on April 6, 1937, who obtained the following history:

Patient became sick around noon on April 5, 1937, with generalized abdominal pain, which lasted about an hour, then became better without medication. Around 7 P. M. the pain returned and became steadily worse. Patient became nauseated and vomited. Pain became steady and was much worse below umbilicus and radiated to the rectum. He was given three S. S. enemas, which returned clear except for one fecal mass about size of an egg.

When first seen by Dr. Bright at noon, April 6, patient had been sick about 19 hours. At this time his pulse was 120, temperature 94°, pulse 120, resp. 20, W. B. C. 12,600, 81%

polys, urine negative.

He was given 500 cc. of ten per cent glucose and carried to operating room at 10 P. M. Under ether anesthesia, a right rectus incision was made. All of small intestines, right and tranverse colon were black, and distended, presenting the typical black, doughy color of these cases. The occlusion was in the main body of the superior mesenteric artery. The abdomen was closed and patient returned to room. He expired in about 10 hours.

Osteomyelitis*

DR. W. W. STRANGE
Booneville, Miss.

Osteomyelitis may be acute, semi-chronic or chronic, depending upon the progress the infection has made at the time of examination and the condition the bone was in at the time the infectious organism made its appearance. Was there an open fracture, gunshot wound, other type of fragmented wound, or was the infection primarily the cause of the bony disturbance?

With acute osteomyelitis without an open wound to invite the organism to a prepared field of invasion, we find from the literature that about fifty per cent of all cases of osteomyelitis is of the hematogenous type, blood or lymph borne. The very young seem to be the victims of this infection. As they grow older the ossification of the bones becomes more complete and we have the percentage of infection growing less.

As Dr. Henry G. Hill has said, acute osteomyelitis (hematogenous) is essentially a disease of childhood.

Contrary to the way most of us were taught, that acute osteomyelitis is primarily an infection of the medullary portion of the bone, we are convinced now that it is an infection primarily of the epiphyseal discs. If it were possible to locate the trouble within six to twenty-four hours after the symptoms begin, we no doubt would find the causative organism in the metaphysis tissues between the diaphysis and the epiphysis. At this stage we would be safe in making a diagnosis of acute metaphysitis.

A study of the records of various hospitals convinces us that very few cases are diagnosed in the early stages of the disease. If it were possible to make an early and accurate diagnosis and institute proper surgical treatment, we would avoid the severe complications, abscess formation, soft and bony tissue destruction usually encountered after it becomes chronic. The long bones of the body seem to be the selected type for acute osteomyelitis.

In order to understand the trend the infection takes, we must have a clear knowledge of the anatomic development of these long bones. With this in mind we are better prepared to make an early diagnosis and institute proper treatment.

The long bones ossify by the following methods: diaphysis or shaft, proximal and distal epiphysis. Between the diaphysis and epiphysis we have the metaphysis. The circulation is derived from three sources. The epiphysis receives its blood supply from the cortical branches which enter along the epiphysical line. The nutrient artery enters the shaft or diaphysis near the center and sends a branch to either end. These branches divide into several others forming capillary ramifications in the metaphysis. The periostial blood supply furnishes nutrition to the cortex.

Complete ossification of the long bone does not take place until around fourteen to twenty years. As mentioned above, osteomyelitis occurs principally in children and young adults. This may be explained by the fact that young growing bone tissue is less resistant to infection than adult bone.

If in trauma, twisting, wrenching of the epiphysis we have a rupture and stagnation of the capillary blood vessels to the metaphysis, the field is prepared for the invasion of the organism producing osteomyelitis. If a culture were made from this area no doubt there would be many staphylococcus aureus and strains of streptococcus found.

Read before the Northeast Mississippi Thirteen Counties Medical Society, March 1944, West Point, Miss.

In the acute hematogenous osteomyelitis the infection is primarily in the metaphysis. In a very short time it spreads to the medullary cavity, involving the entire shaft with subperiostal abscess formation extending into the soft tissue and necrotic sequestrum formation of the bony structure.

EXAMINATION AND DIAGNOSIS

We must base our diagnosis from a carefully taken history of the patient previous to, and at the time of onset or disability, as to a possible foci of infection of the upper respiratory system. Last but not least, if possible, obtain a definite history of an injury. It may be a sprain or twisted limb in or near the joint of the involved bone.

The picture is one of an acute constitutional disturbance in a young child between the ages of two to sixteen years. Begin with a child, high temperature around 103 to 105, rapid pulse 120 to 140 per minute, leukocyte count of 15,000 to 30,000 or above, sudden localized pain in the prox or distal end of a long bone near the joint. Slight palpation in the painful region may not produce tenderness, but long and deep pressure over the lesion will induce severe pain. Usually we do not find swelling, edema, or discoloration of the soft parts around the joint, no evidence of effusion in the joint capsule. Heat applications, manipulation, or massage may aggrevate the constant pain in the affected member. X-ray examination in the acute stage gives practically no information, usually negative and may remain negative until quite a bit of bony destruction has taken place. When the disease spreads and subperiosteal abscesses form, if the tension is not relieved the shaft is attacked and may involve the entire diaphysis. If this condition is allowed to persist the entire shaft may die en masse, forming a sequestrum necessitating the removal of the entire diaphysis.

TREATMENT

It is obvious that the treatment chosen necessarily depends upon the surgeon's conception of pathological process. The patient's general condition should be closely watched and dehydration should receive primary consideration.

After a careful diagnosis is made before the cortex has been perforated and while the inflammatory process is limited to the metaphysis, an incision is made over the area of tenderness through the skin, subcutaneous tissues and periosteum. Care should be taken to keep the incision above or below the diaphyseal side of the epiphysis, to preserve the periosteal attachment to the epiphysial disc. When the infection occurs in an extracapsular metaphysis, the infection might be carried into the joint cavity. If no pus is seen a series of holes are drilled through the cortex into the center of the bone. These holes establish a line of least resistance, and within two or three days pus will drain freely, the infection will spread no further, and there will be no sequestrum formation. The wound is lightly packed with iodoform gauze and closed with a few silkworm sutures. The extremity is placed in a splint or cast for the purpose of rest.

Since the bone lesion is only a local indication of a blood stream infection, we should not expect all the constitutional symptoms to subside at once. Fluid should be given liberally, transfusion may be necessary. A close watch should be kept for the development of a secondary lesion.

Operating Public Health Information Centers*

FELIX J. UNDERWOOD, M.D.
Executive Officer, Mississippi State Board of Health

YOU MAY HAVE heard the story about the little boy who went to Sunday school. His teacher talked one day of Heaven and of the recompense of going there when we die and leave this earth. The little boy got to thinking about death and asking questions about it. After pondering the matter for some time, he said, "I guess I'll quit worrying about death. I haven't woke up dead yet."

Lots of people feel that way about health. They haven't awakened even desperately sick, so they let health take care of itself. On the other hand we have many people who are in a position which engenders keen interest. A four-plus man with the miseries is open-minded about taking syphilis treatment. If you show him a slide of a misshapen infant which his expected baby may resemble, if you let him see a movie depicting the crippled, shuffling gait of the paretic case, if you point out the advantages of treatment and the hazards of its lack, you can almost certainly secure a patient to whom the weekly treatment is an opportunity rather than a nuisance.

I think the opportunities for health education among our public health personnel range all the way from feeding the hungry—those with disease or defects who are eager for health information—to awakening the slothful and even winning the antagonistic. But let us start with the easiest first!

In your county are conducted regularly conferences for expectant mothers, infant conferences, tuberculosis clinics, venereal disease clinics, and certain other services which reach a person in a susceptible frame of mind. These can be and are in many cases not only service centers but centers of public health information and personal health education. How important it is that the entire public health staff recognize the tremendous educational opportunities thus afforded. Here's what one well-trained health officer reported after going into a county:

"Blank County is proud of the educational program put on among venereal disease patients. The problem here was to teach the patients what syphilis and gonorrhea were, their dangers and treatment. A certain number of patients were taken at each clinic and asked if they knew why they were taking shots or why they were given tablets for gonorrhea. They were also asked if they knew how they acquired their diseases. Ninety per cent of the patients thus questioned had no idea why they were being treated. Needless to say no program would succeed if the patient were allowed to continue on this basis. The job was clearly one for health education; the department went to work on it. Each patient was instructed thoroughly on syphilis and gonorrhea. Sometimes it was necessary to give instructions more than once. The results were shown by the decrease in delinquents and by the remarks heard among the patients, such as, "I feel better since I'm taking shots," "my eyes are better," and many more. Education did not stop with the patient. **Plantation owners were contacted and shown that men free of syphilis made better workers. A growing number of these men now bring their suspicious syphilitic and gonorrhea cases in voluntarily."'**

This same health officer said this:

"The Blank County Health Department is proud of its maternity and infant care program—not because of the large number who attend the conferences but because the patients are beginning to realize the benefits they get from these conferences. The problem was to make the women understand that they were coming to these conferences for an examination and help through their confinement, not because some one told them that unless they were examined by the health officer, a midwife would not be allowed to deliver them. By questioning 10 antepartum cases before final examination, it was revealed that one knew why she was being examined. The other nine had no idea. From then on a policy of careful health instruction for each pregnant woman was initiated. Results were gratifying and surprising. Patients came in with a more friendly attitude, asked questions and became greatly interested about themselves and their care. Once interest was aroused, there was no trouble in getting mothers to bring their children with them for examination."

In our service programs then lies a red hot opportunity. This idea is not original with me or even new. But education tied up with service does offer such a real problem as to bear repeating. You are familiar with the saying, "It's not teaching we need so much as reminding." Certainly we health workers need constant reminding to do the things we know. In view of the personal interest an expectant mother or some other person in the service program has in her own case we are losing our most fertile field for health education unless we give special attention to educating her while interest is high.

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*Delivered at the Mississippi Public Health Association, December 10, Robert E. Lee Hotel, Jackson

To go from the problem which I think we will all grant—of education for those who ask it either directly or by their enrollment in our service programs—let's consider some of the ways.

The clerk is in a strategic position. Without going out of her way, she has opportunities daily to put in her lick for health education. The essential qualifications for the clerk are that she should have reasonable training in office methods, but more important than professional qualifications she should be a local, well-known and highly respected person who has a wide familiarity with the social fabric of the county. The other personnel are field workers, the clerk is the office representative of the unit and is an invaluable asset in translating the desires of the people to the health officer and in interpreting the purposes of the department to the practicing physicians and to the people.

The clerk is the "receptionist" in the health department. If she is courteous and pleasant, then the health department is off to a good start with whoever seeks its services. This goes for the telephone too. Questions about services available should be courteously and completely answered over the phone. It is not necessary that the clerk find out who is calling before volunteering information about public health services conducted by the health department. We as health workers do not want to indicate that if Mrs. Supervisor, Beat 2, is calling that excellent service is available, while if the person on the other end of the line is only Mrs. Tenant Farmer there are limitations. Public health services are for the good of white and Negro, young and old, rich and poor, and we as public health workers want to leave the impression of courtesy and efficient attention to a task of service, regardless of who the recipient is.

The keeping of an adequate and up-to-date supply of health education materials is another important educational job for the clerk. We know that when used in connection with home visits, conferences, and meetings materials play an important part in health education. Keep your shelves stocked—and remind the health officer, nurse, sanitation supervisor and v. d. investigator from time to time to use movies in connection with their clinics and other meetings. If your department has no projector, you can borrow one for a two- or three-week period from the Health Education Division.

To the clerk who is the record-keeper, I should like to say that this job is of vast value. Primarily records serve three objectives: (1) better service to the individual patient, (2) more efficient administrative procedures, and 3) research. It is difficult to measure the value of one particular job, but over a period of years records will give an accurate index. Health education means health behavior. Evidences of health education are changes in the health habits of people. A scoring schedule in health education using information from records might show for instance for 1932 and 1942

> The extent to which expectant mothers habitually consult their physicians early in pregnancy.
>
> The extent to which mothers operate with school health examinations by being present upon invitation.
>
> The extent to which parents procure correction of remediable defects.
>
> The extent to which primitive methods of excreta disposal have been replaced by modern sanitary facilities.

If this scoring schedule showed an increase, and I hope it would in any Mississippi county, we could feel that constructive health education in these fields had been going on.

Vital statistics can be vitalized by emphasizing the human element inherent in the basic data. Vital statistics can be interesting because each and every one of us is a vital statistic—a "vital stastic" as one little six-year-old said. Who of us is not interested in the facts touching on the most important, precious, and intimate part of our lives? Births, deaths, illnesses, marriages, and divorces far outweigh the other events which shape and govern humanity.

If you think people are not interested in a thing like a birth certificate, you ought to see some of the letters that come into the State Division of Vital Statistics. Some people would gladly pay one hundred or two hundred dollars to get this valuable proof which they need.

The coordinating service of the clerk in checking and double checking with the registrar's records and the maternity record of births is invaluable. It will save us in the future from some of the weeping and wailing and gnashing of teeth to which the Division of Vital Statistics has been subjected in the recent maelstrom.

Part of this trouble, I must admit, we as public health workers brought on our own heads. If we had been carrying the message to Garcia in previous years as we should have, we might have recorded many a birth which this year, last year, and the year before required a school record, an insurance statement, or some other two pieces of evidence as proof of birth.

Birth registration can be greatly aided by the public health nurse. Not only will she find in home visits those mothers whose babies should be registered several months in the future. But she will find those youngsters of preschool and school age whose births were not recorded due to negligence on the part of parent, physician, or midwife. As part of her home visit, it will not cost much more in time but will help the health department program considerably for the nurse to find out about birth registration status of the whole family.

The nurse's function in public health education is important and fruitful. She seldom gives addresses or public talks, but works through the home and the schools. She arranges conferences with groups of mothers or prospective mothers, sends personal letters to pregnant women and to parents who should have their children's defects corrected, and uses her imagination and ingenuity in a hundred ways in raising the standards of personal hygiene and public health of the community.

The nurse is a connecting link between the school medical service and the home. She works with the teacher, the physician and the parent for the betterment of the health of the child. Actual instruction in hygiene and public health is given by the teacher. But the nurse can greatly help the teacher obtain the right information upon which to base her teaching. This she can do through consultation and provision of materials. Regular nursing visits in schools have been scheduled in one county in Mississippi as part of its health education program. In this way, the teacher can know when to expect the nurse and plan her program accordingly. She can take up with her the questions of Sally's poor vision or Johnnie's bad hearing, or Martha's adenoids. Home situations can be discussed with which the nurse is likely to be more familiar than the teacher. It is a special function of the nurse to interpret the results of the medical examination of the schoolchild to the teacher and parents. She assists also in securing correction of the defects found.

In the day-by-day activities of the public health nurse, she has an opportunity to do health education of every kind. For example a nurse may go into a home to see a newborn baby whose mother has been under treatment for syphilis. This visit is classed under the infant and preschool program, but while the nurse is there, she also advises the mother regarding her postpartum care (maternity service); she inquires about birth registration, then advises the mother to come back to the syphilis clinic when the baby is old enough (venereal disease service). She certainly advises the mother to have the baby protected against smallpox, dipththeria, and whooping cough when it is old enough (communicable disease control), just as she makes note of the home conditions, such as type of toilet facilities, water supply, screening and general cleanliness (sanitation). She leaves certain pieces of literature on the care of the newborn as well as offers advice. Thus the one visit would cover nearly every phase of health education. Such integration of service and education on all the health conditions of a family augur well for public health in the state.

Let it be said in conclusion that in the kind and amount of education we do lies our progress in conquering disease and furthering constructive medicine. Health education is health behavior. We are good educators—not as we do for people—but as we teach them to do for themselves. We must go on with the type of health education that gives a sense of the fullness of personal health and the fullness of cooperative living—not just as an idea, or an empty phrase, but as a compelling force in motivation and action.

The Mississippi Doctor

Published monthly at Booneville, Mississippi

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The journal with a vision which encourages a plan of delivering modern medicine to the masses at less cost to the individual and more profit to the practitioner. It champions the community hospital, the hub around which this service must be built.

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Manuscripts and material for publication under the Mississippi State Medical Association should be received not later than the twentieth of the month preceding publication. Address material to Lawrence W. Long, M.D., Suite 412 Standard Life Building, Jackson, Mississippi.

REHABILITATION AND REEMPLOYMENT

Perhaps as many as a million soldiers, sailors and marines will be discharged from our armed forces during 1944. Many of them will be casualties of battle; many more will, no doubt, have been found unequal to the rigorous physical and disciplinary demands of military life. Fortunately a good share of the men in both of these classifications can be reabsorbed into industrial and other employment without serious difficulty. In many cases the restoration of a seriously handicapped man or woman to civil life will call for the best type of cooperation between physician, vocational educator and rehabilitation case worker.

The rehabilitation of veterans is a specific responsibility of the Army, Navy and Veterans Administration, so assigned by law. Briefly, intensive treatment in military hospitals determines whether disabilities are recoverable and hence suitable to eventual return to duty. Serious handicaps receive special attention in designated hospitals where social adjustment and training go hand in hand with medical care. These patients when sufficiently recovered are discharged from the Army or Navy. Then the Veterans Administration provides vocational training and employment, provided the disability is service connected, that the person is honorably discharged and that rehabilitation is needed to overcome the handicap.

The expanding vocational rehabilitation program of the Federal Security Agency makes it doubly certain that private physicians will be keenly conscious of reconstruction and placement of the handicapped in employment. Under this program federal aid is provided to enable boards of vocational education and state agencies for the blind to furnish disabled persons with all services necessary to render them employable or more advantageously employable. These services include medical and surgical care, hospitalization, physical and occupational therapy, prosthetic appliances, vocational counseling and training, maintenance during training, occupational tools and equipment, and placement in employment. Except for certain groups of war-disabled civilians and federal employees injured in line of duty, persons receiving physical restoration services or maintenance grants must be in financial need.

The federal Office of Vocational Rehabilitation is responsible for establishing standards in the various areas of service, for technical assistance to the states and for certification of funds on the approval of state plans for vocational rehabilitation meeting the requirements of the authorizing act of Congress. A national professional advisory committee, composed of representatives of fields of medicine actively concerned with nursing, medical social work, physical therapy and occupational therapy, has been appointed by the Federal Security Administrator to assist the Office of Vocational Rehabilitation in the technical phases of physical restoration services. Similar advisory committees will be appointed by all state rehabilitation agencies to guide them in establishing and maintaining professional standards for physical restoration. Further information can be obtained from the state boards of vocational education, from state agencies for the blind or from the Office of Vocational Rehabilitation, Federal Security Agency, Washington 25, D. C.

There is a growing realization in industry that handicapped persons are more often assets to a plant than otherwise. There is mounting evidence that they are absent less, that they have fewer accidents and that both the quality and the quantity of production compare favorably with those of normal co-workers. It is not what the man has lost but what he has left that establishes his value in a specific job.

The Council on Industrial Health and the Council on Physical Therapy have set up a joint committee on rehabilitation. This committee believes that rehabilitation is essentially a medical problem, that the American Medical Association should notify the profession of legislative proposals in this field and see to it that physicians are in a position to participate effectively in current plans. There will likely be considerable dependence on the profession, both in general and in special practice, to carry out the medical aspects of the federal-state program now in formulation. Practitioners should therefore be in possession of as many details as possible, regarding both state administrative organization and the special facilities necessary for adequate diagnosis and successful case management.

(Editorial from AMA Journal, May 27, 1944.)

MISSISSIPPI DOCTORS AT WAR

Many thousands of Mississippians are now on all fronts of this world-wide conflict. Doctors, nurses, and medical corpsmen represent the medical profession of our state. Many of these people are making a real sacrifice to get this job over. Doctors, generally speaking, as a class, have given up more to do this necessary job than any other group, and as a group they are needed as badly as any trained personnel in the Army or Navy. A doctor learns much of value in the Army or Navy, if he still has the power and will to learn—how to keep men well by the thousands; how to prevent disease; how to maintain morale of troops; how to evacuate and treat wounded quickly; and how to practice necessary psychology when badly needed. I have talked to doctors who served in the last war and they generally agree that the experience they gained left them better doctors with quite a different outlook on humanity. Association with the men on duty in the armed forces, watching them adjust to a new life of regimentation and routine, immunizing them against the various diseases, teaching them personal hygiene, and caring for their ails and ailments is quite different from the ordinary civilian practice, but is an experience of benefit to all. Many doctors who left civilian practice to enter the armed forces and state that their duties are foreign to their training, have complained that very little clinical medicine is to be learned. I say there is a lot more to medicine than just "clinical medicine," such as psychological handling of people, administration, business, preventive medicine, and others which can be of universal value now and in later life to each man. As one friend of mine, high in command in the Medical Corps, said to me not long ago, "I hope that the next medical officer they send me is not a surgeon, I have had assigned about twenty and they have all told me what good surgeons they were at home."

Not the least of all of these things is the fact that many thousands of lives are being saved by these doctors of the service putting into effect the wonderful advances in medical science. Men are transported by air ambulances to hospitals quickly and very few who arrive at hospitals are not saved.

The profession at home is working hard and long hours, too, in the interest of the civilians needing medical care. They, too, are to be commended for their splendid attitude toward this war.

Everyone joins in a tribute to the doctor on the military front—he is doing a grand job badly needed as we approach a very intense phase of the war. —LWL

FOUR-YEAR MEDICAL SCHOOL

At our last meeting the House of Delegates voted in favor of Mississippi having a four-year medical school. It is evident that we must have it if we continue to give medical preparation in the state. We can have an up-to-date post-war medical school that will be the very best in the United States. To do this the entire state must admit awareness of the need and lend an intelligent assistance. Our per capita distribution of funds gives Mississippi a basis for a medical school and helps to balance the distribution of doctors as in no other state in the union. We must have a central hospital equipped and staffed up to the best approved in medical science, so that every hospital in the state shall be affiliated with it and feel the throb of its medical education heart beat. What would the army do without first aid on the firing lines? We can have the best in medicine on the civil firing lines if we have the vision, the mind and the fairness to procure it. It is good human economy that every person in the United States have the benefit of the mest medical service known, and provided by the profession rather than a paternalistic government.

You will read with interest and benefit the guest editorial of Dr. Carl Sanders on a subject that has become inescapably of the greatest importance to the profession personally.

More than one-third of our doctors are in the armed forces, others are still needed. Before the war this country had about one doctor to about 800 population. It has been thought by experts that health conditions might become serious if we have less than one doctor to 1500 people. It is claimed that 28 states have about reached that point. Our state has one active doctor to 2350 population. But even-so we can and will spare a few more doctors if the boys at the front actually need them. The battle line, however, must reach from the vegetable garden to the very front line in France if we are to win and win now. Reason and justice must be exercised. Every doctor in civil practice must do his part and do it well. He must demonstrate his patriotism in no uncertain manner. It is no time for a practitioner to be independent just because money is coming a bit easy. Our older men are showing their patriotism in a fine manner.

We congratulate Dr. H. F. Garrison on being able to obtain such an outstanding man as Dr. Byron Alexander as a member of the Children's Clinic. Jackson is growing as a medical center. It is hoped that the benefits of this specialty will reach out to every nook and corner of the state as it has in Jackson, Vicksburg, Meridian, Greenville, Hattiesburg and other larger places. The small town and rural communities of the South are producing many more babies proportionately than the North and East, and they are mighty good Anglo-Saxon babies deserving special attention.

Rusty is dead. Six and a half short but beautifully happy years measured the span of his life. During this time he did not commit a single deed that merited censure or reproof. All his yesterdays will be, to me, a cherished memory. All my tomorrows will be filled with sorrow and regret because of his untimely going. I can expect nothing but loneliness since he was my constant companion both day and night. My life has been influenced by his companionship and his marvelous love and devotion. There are no words that could express my appreciation for his faith in, and loyalty to, his master. If every child who knew him and courted his friendship should bring, daily, a single rosebud, his simple grave would be a real and perpetual bower of flowers. He is gone from me but I feel that there should be, that there may be, that there is, a place where we can be reunited. So I will not say goodbye, but au revoir to the noblest specimen of the canine species that ever lived. These lines are being written while kind friends are tenderly laying him beneath the sod. I simply could not see this done.

(Note to the editor) Please carry these lines as my contribution to the current issue of the journal. Operation disclosed that he suffered from a ruptured gangrenous appendix. He did not regain consciousness, hence his death was due to shock. Not too little but too late.

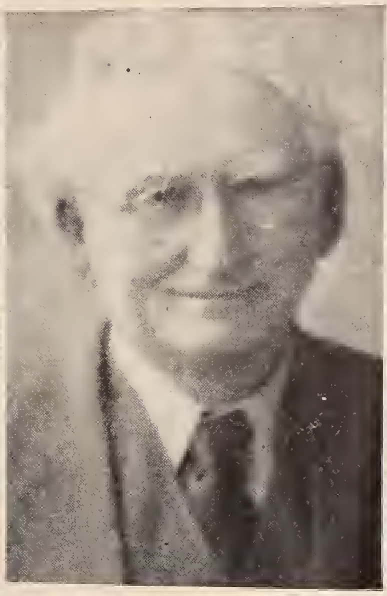
G. S. B.

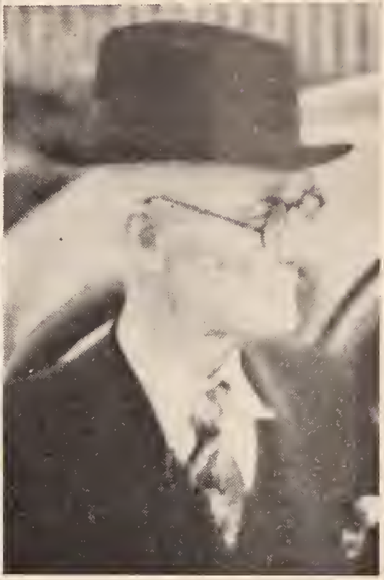
In the back of this issue you will find the index for Volume 21 of the **Mississippi Doctor**. Those who are accustomed to having the year's issues bound in one volume will be glad to place the index with the volume completed with May issue.

To Miss Louise Williams, librarian for the State Board of Health Library, we express appreciation for assistance in compiling this index each year.

With the Half-Century Club

DR. W. A. EVANS
Aberdeen, Miss.


DR. G. S. BRYAN
Amory, Miss.


DR. R. L. HAGAMAN
Raymond, Miss.

Month by Month the members of the profession in Mississippi who have been in the practice for fifty years or more, and are therefore eligible for membership in the Half Century Club organized at the last meeting of the Mississippi State Medical Association in Jackson, will be written up on these pages. Observations from these men or readers who know them are invited. Their experiences in practice, their philosophy of life, their prognostications of the future, their wit and wisdom will be welcomed and appreciated.

Dr. W. A. Evans, a native of Mississippi, but a well-known citizen of the world, suggested the idea of the Half Century Club. His name is a household word in the Mid-South associated with the "How to Keep Well" column in the **Commercial Appeal.** He is really better known in the state of Illinois than in Mississippi, but our state knows him well, loves and reveres him. He has been active in medicine for more than a half century.

There are no greater heroes to be found in this second world war conflict than the eligibles of the Half Century Club, or those doctors who have been active in the practice for forty to sixty years, who had planned to retire, or who had retired, but realizing the need for their services, have returned with renewed energy and devotion to practice. Many of them are putting up long hours and they are doing the job well. What has been spoken of as the Osler idea of chloroforming a man at sixty as worthless certainly can not stand the test with our practitioners in Mississippi at this time since 54 per cent of our doctors are past sixty years of age. If a man remains mentally and physically fit, he should really be worth more to human society every day he lives even though he lives a full century. We have enough medical knowledge and wisdom in our men past sixty, seventy, and even eighty, to enrich our medical history and to add health blessings to the world. The old red mule on our farm which lived to the age of 37 was the very best in her last days for the planter because by experience and necessity she walked such a straight row. The old coon dog, when led by a rope and taken on the hunt just to confirm the diagnosis at the tree, saved many good board trees. Not to utilize the knowledge and the wisdom of our men who have been in the practice fifty years and who now are doing such noble work, is like keeping a flock of sheep and letting them shed the wool, like building a fine barn and leaving off the top. In this department we hope to record ideas, ideals, bits of wise advice gained from observation that will be very interesting and very valuable.

Dr. Giles Sanford Byan of Amory was born at Aberdeen on April 14, 1863. At the time of his birth his father was a Confederate soldier, a native of Huntsville, Ala., as was also his mother, Jane Florence Meade Coe, who died when he was only a few months old and he was cared for by a spinster paternal aunt. This aunt devoted her life to the care of Dr. Bryan, his brother and a sister. The doctor's first schooling was in a private institution in Aberdeen. Later when he was nine his father moved to the country where his father, a learned man, was his main teacher. In 1880 he entered the University of Mississippi, but four-cent cotton and the trying times of Reconstruction kept him from graduating. He taught school several years and later entered the old Memphis Hospital Medical College. One of his most valuable years was spent in a private hospital under Dr. W. B. Rogers where the Goodwin Institute now stands.

Dr. Bryan began the practice of medicine in 1888, at Jasper, Ala. On August 6, 1889, he moved to Amory where he has maintained an office since that time. From the time he entered the practice of medicine he has devoted his whole mind, heart, and soul to the profession he loves. He has served as president of the Mississippi State Medical Association, on the State Board of Health and in many other places of trust and honor. No man in Mississippi today has a keener interest in medical science than Dr. Bryan after fifty-six very active years. He is a fine example of our erstwhile expressed philosophy, "If a man keeps mentally and physically fit, he is worth more to human society every day that he lives though he lives to a hundred." His medical life will continue to be an inspiration to the profession of Mississippi.

Dr. Hagaman, who was born April 12, 1866, is a native of West Feliciana Parish, near Jackson, Louisiana. He received his education in the public schools of Jackson, attended Centenary College, and was graduated from Tulane University April 6, 1891. He later did postgraduate work at Chicago Polyclinic.

In 1891 he began the practice of medicine at Centerville, Mississippi. Now having attain his fifty-third year of practice, Dr. Hagaman can look back over a record of fine service and accomplishment. His many responsible positions in connection with his profession attest to his ability and leadership. He was local surgeon for the Illinois central System for a number of years both at Centerville and at Raymond, where he later moved. Formerly County Health Officer of Wilkinson County, and surgeon in charge of the state penitentiary for nineteen years, he is now physician and surgeon for the Hinds County Tuberculosis Hospital at Raymond. He is a member of the Hinds County Medical Association, Mississippi State Medical Association, and the American Medical Association. Besides his professional affiliations, he is a Presbyterian, a Mason, and a Knight of Pythias.

During his early life, bird dogs and saddle horses were his hobbies, but now he prefers vegetable gardening.

In 1895 Dr. Hagaman was married to Katherine Vernon Darden. They had three sons and one daughter, Dr. Frank Hagaman, deceased, Mr. Robert Lee Hagaman, Dr. Van Dyke Hagaman, and Mrs. Brister Ware.

We understand the Illinois Central Railroad is planning to give Dr. Hagaman a gold plaque for fifty years of distinguished service. This is a well-deserved honor.

Dr. Hagaman is friendly, courtly and alert. His interest in medicine is still keen and his face is turned to the future.

News and Comment

EXPRESSES APPRECIATION

I wish to thank the Mississippi State Medical Association and the members thereof through these columns for their very kind and sympathetic consideration. Everyone has been wonderfully kind.

A copy of the two messages are self-explanatory:

May 8 PM

Dr. Lancelot L. Minor, Sr.,

The Secretary of War desires me to express his deep regret that your son, Lieutenant Lancelot L. Minor, Jr., has been reported missing in action since April sixteen over Rumania. If further details or other information are received you will be promptly notified.

Dunlop, acting the Adjutant General.

May 25 PM

Report just received through the International Red Cross states that your son, Lieutenant Lancelot L. Minor, Jr., is a prisoner of war of the Rumanian Government. Letter of information follows from Provost Marshal General.

Dunlop, acting the Adjutant General.

Lieutenant Minor was the pilot of a B-24 Liberator bomber, based near Tarranto, Italy.

From information received from the Memphis Chapter of the Red Cross, he is likely a prisoner of a camp and hospital at Brasov, northern part of central Rumania near Hungary.

Best wishes and love to you all.

Most sincerely yours,

L. L. MINOR, Memphis, Tenn., Route 4

FOR BETTER MEDICINE

Martin V. B. Miller, Meridian attorney and a newly appointed trustee of institutions of higher learning, has announced the board soon would begin a survey to determine the possibility of setting up a four-year medical college in the state.

Terming this program one of the most important in many years, Mr. Miller declared he and other board members will give a large part of their time to the survey.

Mr. Miller resigned his legislative post to take over his duties on the college board.

I graduated in medicine in 1915, and early in my medical career as a country doctor I made the observation that the time was approaching and would probably materialize in my lifetime, that in order for medicine to carry on in the interest of the sick, it would be necessary that suitable hospitals be established in reach of the whole population. I have lived to see that prediction coming into fruition in this state, with the prospect of a system of standardization which will be akin to pioneering, an example for other states to follow.

About 12 years ago, I read a paper on the community hospital and medical education, advancing the theory that there should be a central charity hospital, cooperating and coordinated with the State Hospital at Whitfield, the T. B. Sanatorium, and with the various serving as centers for the communities which they serve, and the central hospitals serving as a center for treatment of special cases, and study, and organized so that they could offer approved interneships.

This paper was freely and favorably discussed, and I was invited by the then president of the State Hospital Association, to come to Jackson, the day before the next meeting of the association and discuss with him the ideas I had advanced, so that they could properly come before the association. I accepted the invitation, was on hand to carry out the purposes of the invitation, but some self-appointed leaders thought the idea inopportune and the conference did not materialize, but later these same self-appointed leaders brought the matter before the medical and hospital associations, and it is now before the legislature, for consideration of the central hospital idea, the community hospital bill already having passed.

I am in position to assist greatly in the consummation of this idealistic and realistic measure, and I shall be glad to do so.

J. A. RAYBURN, M.D.
Pontotoc, Mississippi

ANNOUNCEMENT

The Seale Harris Clinic announces to the medical profession the association of Dr. Leon S. Smelo and Dr. Larry Shipp. After the war has ended Captain James Crenshaw and Captain Max Emmert, now serving in the Medical Corps of the United States Army in the southern Pacific, will return to the clinic. The practice of the Seale Harris Clinic is limited to the diagnosis, dietary management and medical treatment of internal diseases.

ANNOUNCEMENT

The Children's Clinic, Dr. Harvey F. Garrison, M.D., 409-413 Lamar Life Bldg., Jackson, Mississippi, announces to the medical profession the association of Dr. Byron Alexander.

After the war, Major Harvey F. Garrison, Jr., now serving in the Medical Corps of the United States Army, will return and also be associated with the Children's Clinic.

The new negro soldier on guard duty reversed the usual salutation by saying, "Look! Who here!"

THE NEW PRESIDENT-ELECT

JAMES K. AVENT, M.D.
Grenada

James K. Avent; born May 9, 1895, Oxford, son of T. W. and Sidney Ellen (Parks) Avent.

Education: graduated Oxford High School 1914; University of Mississippi, Ph.G. 1917; B. S. 1921; Tulane University, M.D., 1921; interne, Illinois Central Hospital, New Orleans, 1920-21; Charity Hospital, New Orleans, 1922; study at New York Postgraduate School of Medicine and Philadelphia Clinic.

Career: general practice and surgeon, Grenada since 1923; Staff Grenada General Hospital; Medical Corps, U. S. Army during World War.

Married Louise Thurman, daughter of T. W. and Isabell (Pope) Thurman, New Orleans. Two children, Louise, born Feb. 21, 1925; James Kirl, born Feb. 11, 1927.

Dr. Avent's memberships include Phi Rho Sigma fraternity, Baptist Church, American Medical Association, Mississippi State Medical Association, Winona District Medical Society.

Dr. Avent's medical alertness is keeping him abreast of the times. His own outstanding work in an up-to-date community hospital which is rendering service equal to a much larger institution bespeaks his progressiveness and courage. A very personable physician, Dr. Avent keeps his mind and hand steadfastly turned to the future. He is fully worthy of the high bestowed upon him.

WOMEN DOCTORS ORGANIZE

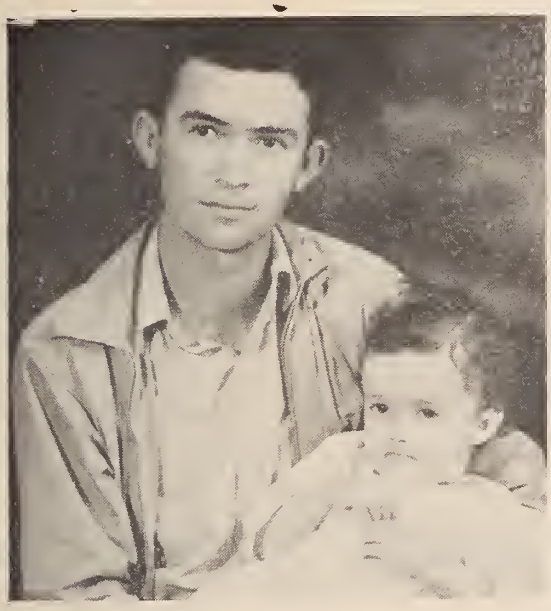
Seven Mississippi women doctors met during the meeting of the Mississippi State Medical Association in Jackson and organized the first unit of women doctors ever undertaken in the state. Dr. Virginia Small of Greenville was elected president; Dr. Virginia Howard of Jackson, vice-president; Dr. Margaret Carraway of Gulfport, secretary; and Dr. Estelle Magiera of Jackson, treasurer. Others enrolled include Dr. Agnes Carr of Whitfield, Dr. Eva Dodge of Jackson, and Dr. Barbara Hunt of Meridian, and Dr. Emma Gay of Gulfport.

PENICILLIN DISTRIBUTION

The War Production Board has prepared a list of hospitals to which the initial distribution of penicillin will be made. In addition to supplying their own requirements, these institutions are to act as depots for hospitals in the vicinity which are not on the initial list. Each depot hospital will have a monthly quota, which may be purchased through the Office of Civilian Penicillin Distribution, War Production Board, 226 West Jackson Boulevard, Chicago 6, Illinois. From that office orders will be passed on to penicillin manufacturers according to the supply available and the producer will ship penicillin to the hospital through the regular channels. Penicillin manufacturers cannot accept orders except as they come through Dr. Keefer of the Office of Civilian Penicillin Distribution.

Depot hospitals in Mississippi are: Booneville, Northeast Mississippi Hospital; Clarksdale, Clarksdale Hospital; Hattiesburg, Methodist Hospital; Jackson, Mississippi Baptist Hospital; Meridian, Meridian Sanatorium; Vicksburg, Mercy Hospital-Street Memorial.

CASE REPORTS



R. C. white male, born Feb. 1, 1921, operated Feb. 24, 1924, at the Northeast Mississippi Hospital for abscessed appendix of three days standing. Age at time of operation three years and 23 days.

F. J. C., his daughter, born April 3, 1942, operated for a gangrenous appendix of five days standing on April 22, 1944, at two years and 19 days of age, at the Northeast Mississippi Hospital. This picture was taken as she left the hospital ten days after her operation. —Ed.

SHARP & DOHME ANNOUNCES

Announcement is made by Sharp & Dohme of the release to the market of a new 500 cc. package of 'lyovac' normal human plasma. This new package supplies the plasma equivalent of two pints of whole blood, twice the quantity of plasma as the package which has been in the field for some time.

A new greaseless, anesthetic and analgesic calamine ointment with specific anti-pruritic action has been released by Sharp & Dohme. 'caligesic' ointment contains calamine, benzocaine, and hexyl-m-cresol, is supplied in 1½-ounce collapsible tubes, and is recommended in the symptomatic treatment of certain types of dermatitis, including poison ivy and poison oak dermatitis, summer rash, pruritis ani, pruritis scroti, skin inflammations and irritations, and temporary eruptions of the skin.

COURSE IN ELECTROCARDIOGRAPHY

A graduate course in electrocardiography for physicians will be given at the Michael Reese Hospital, 29 Street and Ellis Avenue, Chicago 16, Ill., by Dr. Louis N. Katz, from August 21 to September 2.

OLD NAVAL COMMISSIONS WANTED

The National Naval Medical Center of Bethesda, Maryland, is endeavoring to collect for its archives a complete set of commissions issued to naval medical officers, and signed by former presidents of the United States. It is hoped that libraries and individuals will cooperate.

REFRESHER COURSES

The University of Illinois College of Medicine announces that its fall didactic and clinical refresher course for specialists in otolaryngology will be held at the college from September 25 to 30 inclusive. The fee for the course is $50.00. Since registration is limited to twenty--five, application should be filed as early as possible. Write for information to Department of Otolaryngology, University of Illinois College of Medicine, 1853 West Polk Street, Chicago 12, Illinois.

MAKE GRANT

The Board of Trustees of the Kellogg Foundation, meeting December 21, votet a grant of $35,000 for study by the Post-War Planning Committee of the American Hospital Association of the post-war hospitalization needs of America.

.:. Doctors in the Service .:.

Capt. Richard A. Street, Jr., formerly of Mercy Hospital-Street Memorial, Vicksburg is serving in England with the U. S. Army Medical Corps. He writes that there is much he would like to tell, "but censorship forbids. I am chief of septic surgery in this unit and feel that I have a very excellent assignment. Our food and quarters are both excellent. Hope to be able to make the state meeting in nineteen-forty-five," he concludes.

Capt. Street is with the Ninety-ninth General Hospital in England.

MERCY HOSPITAL-STREET MEMORIAL

Perhaps no hospital in the state has through the years of its service steadfastly maintained a higher standard of excellence than has the Mercy Hospital-Street Memorial. Founded in 1900 by a family distinguished in Mississippi medicine, it established its strength first in the superior training and medical vision of the men who staffed it, and second in the up-to-date equipment which further qualified it.

The Mercy Hospital-Street Memorial is the lengthened shadow of the Street family, who were originally from northeast Mississippi. Among the earliest builders of that section, the Streets were a well-known family of Rienzi and Corinth, noted chiefly for an aggressiveness in fruit culture, farming and the mercantile business. This quest for truth and service found expression later in the three brothers, George M. Street, Don P. Street, and Augustus Street, who became joint owners of the Vicksburg Sanitarium. Dr. D. P. was the first to enter the practice of medicine in Vicksburg. He purchased in 1900 a residence which was Stephenson's headquarters during the siege of Vicksburg, and with the help of one pathologist began the Vicksburg Sanitarium. George joined the staff next, and after his return from overseas service during World War I, Gus joined his brothers as chief surgeon, which position he has held since. All three studied in New York, have kept actively awake to the advance of medicine, and have been leaders in the hospital and medical associations of their state through the years. The nursing home has been one of the best operated in the state.

Transfer of the Vicksburg Sanitarium took place in September 1943, when the owners decided that the public could continue to be served indefinitely in the future if the operation of the hospital is under the Sisters of Mercy. The former owners are continuing their operation of the Street Clinic, and retain exclusive right to practice medicine and surgery in the Mercy Hospital-Street Memorial.

During the year 1942 the overhead expense of operating and maintaining the services of the institution including the nurse's home was $287,881.85, or $800 per day.

The medical staff of Mercy Hospital-Street Memorial consist of the present members:

Dr. George M. Street
Dr. Augustus Street
Dr. Donald P. Street
Dr. J. A. K. Birchett, Jr.
Dr. Laurence J. Clark
Dr. Guy C. Jarratt
Dr. Preston S. Herring
Dr. Richard Fenstermacher
Dr. Richard A. Street, Jr.*
Dr. Donald S. Hall*
Dr. Lucian Ferris*

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*In military service.

Book Reviews

CLINICAL LABORATORY METHODS AND DIAGNOSIS, by R. B. H. Gradwohl, M.D., D. Sc., Director of Gradwohl Laboratories and Gradwohl School of Laboratory Technique, St. Louis, Mo., Commander, Medical Corps, United States Naval Reserve, retired. Third Edition, Two Volumes, 726 illustrations and 57 color plates. Published by the C. V. Mosby Company, St. Louis, Mo. Price, $20.00.

If a physician attempts to practice medicine nowadays without a laboratory, he is not a modern practitioner; and if he is content with a few elemental tests which he learned in school twenty years or less ago, he is still too far behind to render service abreast with his times.

Clinical Laboratory Methods and Diagnosis was written to help the clinician, the laboratory worker, and the medical student to learn laboratory diagnosis. Since blood is one of the most important fields, hematology is thoroughly stressed, with blood platelets, believed to be a factor in causing postoperative emboli and thrombi, being discussed at length. Up-to-date work on liver functional tests, blood and urinary diatase, clotting and prothrombin time and the infectious diseases; facts on blood grouping, methods of making blood sera, the preparation of blood plasma, both liquid and dried, indicate the exhaustive extent with which the author covers his subject. The new fluorescence method of the examination of tubercle bacilli, vitamin assay tests, Dr. Greenblatt's contribution on the examination of estrogenic substances, Brewer's work on anaerobiasis, and a terse discussion of the new antibacterial agent, penicillin, deserve special attention.

And for the doctor whose interest is turning to the eminent need of knowledge of tropical diseases which the war has brought home, there are slightly fewer than four hundred pages devoted entirely to parasitology and tropical medicine. The day when the tropical medicine section in the large medical association meetings was attended by only a few naval physicians and now and then an inquiring practitioner is now past. Diseases hitherto unseen in the temperate zone will obviously crop up in even the most isolated rural practice with the return of service men from the Pacific and other tropical areas. Doctors can not do otherwise than be prepared to recognize these diseases if their spread is to be curbed.

The third edition represents, in comparison, the unbelievable progress being made in laboratory procedures in making diagnoses of disease. The text outgrew a single volume and is now two large books. The index is printed in both volumes, new color plates and over two hundred new illustrations attest the extent to which the author's endeavor has expanded. The section on tissue cutting and staining has been completely rewritten, and includes many new and important contributions from A. A. Krajian.

This book is so comprehensive and so well written, its use by the laboratory technician and even the research expert will yield as valuable aid as by the small-town doctor. The reason it is so important that the practitioner make an effort to keep up with laboratory methods, even if he does not do them all, is that ninety per cent of people who are ill are seen by the plain doctor first. On him rests the burden of recognition and diagnosis of disease; on him rests, therefore, the greatest possibility for advance in preventive medicine.

VIRUS DISEASES IN MAN, ANIMAL AND PLANT, by Gustav Seiffert, a translation published by the Philosophical Library, Department of War Medicine, 15 East 40 Street, New York, N. Y. Price, $5.00.

This little book of 332 pages brings a better working light on the growing problem of virus diseases. Especially interesting is this survey to the research laboratory man, for much recent foreign literature is included. Since the problem of virus research is as yet unsolved, this guide brings the individual closer to what others have observed. Historical background is given, then specific virus diseases of man, mammals and birds are taken up individually in the latter half of the book.

MEDICAL CARE OF THE DISCHARGED HOSPITAL PATIENT, by Frode Jensen, M.D., H. G. Weiskotten, M.D., and Margaret A. Thomas, M.A. Commonwealth Fund. Price, $1.00.

A concise and challenging treatise of a problem that will rise to paramount importance in the immediate future is this story of an experiment which succeeded. Since thousands of ex-service men, as well as civilians, are figuring and will continue to feature largely in the hospital care of chronic cases, this plan of having what the authors call the Extramural Resident follow up the discharged patient and supervise his treatment was devised. The experiment revealed that 84.1 per cent of all patients suffered from chronic diseases and about one-third of these had chronic degenerative cardiovascular diseases.

The program obviously integrates hospital, outpatient and home treatment, and welfare assistance. The authors conclude: "The hospital is the pivot around which should revolve these services. The provision of home care for discharged medically needy patients is one further step toward a more economical and beneficial use of the hospital in the care of the indigent." In the experiment with a group of 165 patients, 7,268 days of hospital care, at a cost of $29,072, were saved through the services of the Extramural Resident.

ORTHOPEDIC NURSING, by Robert V. Funsten, M.D., Prof. Orthopedic Nursing, University of Va., and Carmelita Calderwood, R.N., A.B. Published by the C. V. Mosby Company, St. Louis. Price, $3.75.

This book is prepared for teachers and students of orthopedic nursing, but it is all the more desirable for the general practitioner's bookshelf. Beginning with a prerequisite for gentleness, for understanding of a certain psychology of illness and the basic principles of posture, the authors launch the nurse into actual details of care of orthopedic patients, the cast and surgical patient, the deformed, the child with bone disorders, acute and chronic inflammation of joints, fractures, etc., all come in for carefully illustrated and detailed care. Many helpful points are given, little suggestions for comfort, morale, cleanliness, simplified techniques, and numerous other valuable aids are contained in this 602-page indexed volume.

The nurse who is anxious to succeed with orthopedic experience, and the physician who would find a wealth of up-to-date information toward a better understanding of this phase of his practice, will welcome this excellent volume. It is concisely and simply edited, and particularly devoted to the practical use of simple methods.

UROLOGY IN GENERAL PRACTICE, by Nelse F. Ockerblad, B.S., M.D., Professor of Clinical Urology, University of Kansas School of Medicine, and Hjalmar E. Carlson, B.S., M.D., Instructor in Urology, University of Kansas School of Medicine. Published by the Yearbook Publishers, Inc., 304 South Dearborn Street, Chicago, Ill. 383 pp. Price, $4.00.

Recognizing the fact that practically all surgical cases are first seen by the family physician, these authors have written this book in order to help practitioners to do these things that are within his province in genitourinary diseases, and suggest beyond what limits his patients need a specialist. There are a multitude of specialties, but perhaps in no field is there greater need for wisdom and skill and training in technical procedures than in urology. The authors have spent years of endeavor in teaching students, and their book is a remarkably clear presentation of actual working experience. Diagnosis, catheters and sounds, infections, nephritis, tuberculosis, tumors, diseases of the bladder, ureters, prostate, malignancies, injuries—all are simply discussed, oftentimes with therapeutic procedures. New aids to urology, intravenous urography, sulfonamide compounds, transurethral prostatic surgery and carcinoma of the prostate, and urinary stones are interpreted with understanding. The authors hope chiefly to encourage an earlier recognition and diagnosis of many urologic conditions that too often reach the specialist too late.

SYNOPSIS OF TROPICAL MEDICINE, by Sir Phillip Manson. Williams and Wilkins Company, Baltimore, Md., Price, $2.50.

This up-to-date reference book is written as a guide for medical officers in the tropics especially, but presents indications of tropical diseases which will be needed by every practicing physician, urban or rural, North, South, East or West. For now service men are being sent back from the tropics afflicted with maladies with which we are practicing entirely unacquainted. We owe careful attention, lest some of these diseases gain a foothold and spread among our people as in virgin soil. Soldiers with new and malignant types of malaria will present a new problem different from patients with homegrown varieties.

This little volume runs the gamut of protozoal, spirochetal, richettsial, bacterial, fungus, virus, nutritional, etc., diseases, and takes up subjects from ague to elephantiasis, together with two or three pages on laboratory methods. It has been used satisfactorily as a guide in the studies of students at Tulane University graduate courses in tropical medicine.

Deaths

DR. A. F. CARAWAY

Dr. Archibald F. Caraway, 63 years old, physician in Gulfport for the past 34 years, died at his home May 17. Born in Fayette, Ala., in 1880, he was graduated with honors in 1910 from the old Mississippi Medical college. He was physician at Gulf Coast Military Academy for 15 years.

Dr. Caraway is survived by his widow, Dr. Margaret Roe Caraway; a son, Dr. Archibald F. Caraway, Jr., Jacksonville, Fla.; two daughters, Mrs. Margaret McClure Waits of Leesville and Mrs. Agnes Burt Kemp of Gulfport, and two sisters, both of California.

DR. GEORGE ACKER

Funeral services for the late Dr. George Winston Acker, veteran physician of Port Gibson, were conducted May 14, at the family residence in Port Gibson by the Rev. Father Martin Maloney of St. Paul's Catholic church. Interment in Wintegreen Cemetery.

Dr. Acker was graduated from Mobile Medical College, Mobile, Ala., in 1889.

Dr. Acker was 77 years of age, a Spanish American War veteran and a resident of Port Gibson for 60 years. He is survived by his wife, Mrs. Frida Schillig Acker; one sister, Miss Jeanette Acker of Mobile, and a brother, Dr. Paul Acker of Mobile.

DR. CHARLES A. SHEELY

Dr. Charles Almon Sheely, physician and surgeon 75, was buried May 21 in Gulfport. He was born in Jasper County, Miss., and was a Tulane graduate.

DR. HARRY P. SAYLE

The body of Dr. Harry P. Sayle, 58, was laid to rest May 18. Dr. Sayle died at his home in Tillatoba after 7 years of illness with a heart ailment, the last two years being spent in bed.

Funeral services were held at the home in Tillatoba by Rev. Gibson, Methodist minister of Sunflower.

Dr. Sayle was graduated from the University of Louisville in 1912. He was born in Calhoun County.

Dr. Sayle practiced medicine in the Tillatoba section for more than 20 years. Previously, he had practiced at Pine Valley and Abbeville. After going there he married Miss Malfred Pryor who with three sons, two in the service, and two daughters, survive him, as do three brothers and two sisters.

DR. ROBERT P. HOOPER

Funeral services for Dr. R. P. Hooper, physician and surgeon of Kosciusko who was found dead in a Durant hotel from an overdose of sleeping powder, were held in Kosciusko May 21.

He was a graduate of Memphis Hospital Medical College, Memphis, in 1913. He also practiced for a time in Philadelphia and Greenville.

He had practiced his profession in Kosciusko for more than 20 years and was a veteran of World War I.

Survivors include his wife; a son, Cadet James Hooper, Memphis; a daughter, Mrs. W. A. Smithson, of Jackson; one brother, Dr. Sam Hooper, of Jackson; and four sisters, Mrs. W. F. Cooper, Houston, Texas.; Mrs. Mary Donald and Mrs. Necie Graves, Jackson, and Mrs. Albert Russell, Philadelphia.

DR. A. J. KISNER

Dr. A. J. Kisner, eye, ear, nose and throat specialist, died at his home in Natchez June 1. He had practiced since 1915. He was 58.

Dr. Kisner was born in Yalobusha County.

He leaves his wife, Mrs. Ruby Clard Kisner; three sons, Major W. Howard Kisner; Lieut. (j.g.) James Kisner and A. J. Kisner, Jr.; two daughters, Mrs. Clifford Palmer of Lakeland, Fla., and Miss Ruby Kisner.

Dr. Kisner was a graduate of the University of Tennessee Medical School and Tulane University.

CAPT. W. I. HUNT

Capt. William Ireys Hunt, 30, a medical officer of Greenville, Miss., was killed in action on Bougainville in the Southwest Pacific on June 5, according to the War Department telegram, barely a month after he had been cited for heroism in crawling under fire to relieve the sufferings of both wounded Americans and Japanese. The citation told how he had crawled through the steaming jungle under heavy fire to give first aid to men on both sides in the battle.

Captain Hunt was graduated from Southwestern University in Memphis, Tenn., in 1934, and subsequently attended Tulane on a Commonwealth Fund scholarship he won for his excellent scholastic record in Memphis. He entered the Army Medical Corps about two years ago and had been overseas for a number of months.

DR. S. F. HILL

Funeral services were held June 17 for Dr. S. F. Hill, who died at his home in Macon.

Born at Carollton, Ala., in 1887, Dr. Hill came to Macon in 1920. He wa graduated in 1912 from the University of Alabama School of Medicine, Tuscaloosa, Ala.

He was active in the Mississippi Medical Association. He was a member of the Methodist Church and a member of the Macon Board of Aldermen. He was a Mason and a Shriner and a member of the American Legion.

Dr. Hill leaves his wife, Mrs. Annie Neville Hill, and a daughter, Mrs. Albert Kelly, Jr.

Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—James G. Thompson, Jackson.

Ear, Nose and Throat—Edley Jones, Vicksburg.

Obstetrics and Gynecology—J. F. Lucas, Greenwood.

Orthopedics—Thomas H. Blake, Jackson.

Pathology and Clinical Pathology—John C. Henthorne, Vicksburg.

Pediatrics—Harvey F. Garrison, Jackson.

Public Health—Felix J. Underwood, Jackson.

Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

Discussion and comments are invited.

DERMATOLOGY

ONE-DAY TREATMENT OF SYPHILIS WITH FEVER AND MAPHARSEN. *Venereal Disease Information,* Vol. 25, No. 1, April 1944—Nathaniel Jones, Passed Assistant Surgeon (R) U. S. Public Health Service: Charles M. Carpenter, M. D., Ruth A. Boak, M. D., Stafford L. Warren, M. D., the Departments of Bacteriology and Radiology, the University of Rochester School of Medicine and Dentistry, Rochester, N. Y., and Henry Hanson, M. D., Commissioner of Health, Florida State Board of Health, Jacksonville, Fla.

It is recognized that a method for the rapid treatment of syphilis, equally as safe as the standard type of therapy, would have the advantages of shortening the stage of infectivity, eliminating a long period of treatment, and decreasing the cost of therapy. Investigations during the past 15 years have shown that although physically induced fever is effective in the treatment of general paresis (1), it is of little value in early syphilis (2), because of the failure of induced fever cure primary and secondary syphilis in man, a study employing subcurative doses of arsenical compounds concurrently with fever was carried out on experimental syphilis in rabbits.

The first observations indicated that favorable results were obtained from a single intravenous injection of neoarsphenamine (10 mg. per kilogram of body weight followed by a three-hour fever at 41°.5 C. (3). Later experiments with various combinations of fever and mapharsen demonstrated that the most effective method consisted of a single intravenous injection of mapharsen in the amount of 2 mg. per kilogram of body weight at the termination of a fever at 41°.5 C. for 3 hours. The success of this type of therapy in experimental syphilis in rabbits suggested that it might be of value in human beings. The present report records the preliminary results in the treatment of early syphilis with fever and mapharsen. It is based on observations made through Sept. 1, 1943. The work is being carried on at a center established for the rapid treatment of venereal diseases at the Duval County Hospital, Jacksonville, Fla.

Patients selected for the study are limited to those with clinical evidence of early syphilis who have had no previous antisyphilitic treatment. The diagnosis is verified by darkfield and serologic examinations. Contraindications to this type of therapy are active pulmonary tuberculosis, heart disease, peripheral vascular disease af any type, and extreme obesity. The majority of the patients treated were young adults: 79 per cent were negro, 21 per cent white; 46 per cent male and 54 per cent female.

The patient is admitted to the hospital on the afternoon of the day prior to treatment and given a general physical examination. A chest roentgenogram and an electrocardiogram are made whenever indicated. A urinalysis and a test for hemoglobin are the only laboratry examinations carried out routinely. Before treatment the patient is given approximately 3,000 ml. of water, and a total of 12 gm. of sodium chloride in 4-gm doses at approximately 4-hour intervals. No special dietary precautions are observed. Breakfast is permitted on the day of treatment.

The treatment consists of the concurrent use of fever and mapharsen. The amount of drug and the time of administration in relation to the fever are based on results obtained in the treatment of experimental syphilis in rabbits with a similar type of therapy. Because animal experiments have shown that fever increases the toxicity of mapharsen, subcurative amounts of the drug were employed for the first series of patients to avoid toxic reactions. Three schedules of treatment have been used.

Administration of mapharsen:—The three schedules are: A) Mapharsen in the amount of 1mg. per kilogram of body weight is administered during the period of induction of the fever, but before the temperature reaches 39.5° C. (103 F). The calculated amount of drug is dissolved in sterile, triple distilled water and injected intravenously. B) Mapharsen in the amount of 1 mg. per kilogram of body weight is injected in the evening, and fever therapy is carried out the following day. A second intravenous injection of 1.5 mg. of mapharsen per kilogram of body weight is given at the termination of the fever. The calculated amounts of the drug are dissolved in sterile, triple distilled water and injected intravenously. C) Mapharsen in the amount of 2 mg. per kilogram of body weight is administered at the termination of the fever. The drug is dissolved in distilled water as in the other schedules. It is then added to 250 ml. of 5 per cent glucose in a 0.85 per cent solution of sodium chloride and injected intravenously by the drip method. This procedure requires about 15 minutes and is usually completed by the time the temperature has receded to 40.5° C. (105 F.).

Fever Therapy: At 7:30 on the day of treatment, the patient is placed in a Rochester Radian Energy Cabinet (4). The specific gravity of the blood plasma is used as a guide to insure a normal fluid balance during fever (5). The temperature is gradually elevated to 41.1° C. (106 F.) during a period of two hours and is maintained at that temperature for 5 hours. The temperature is recorded continuously by means of a resistance thermometer and is also checked periodically with a clinical thermometer. At 10-minute intervals, pulse rate, respiratory rate, and temperature are recorded. During the fever the patient is given from 300 to 400 ml. of fluid per hour by mouth when the specific gravity of the plasma is low (1.0258 or less), and from 400 to 600 ml. per hour when high (1.0288 or higher). Throughout treatment the patient is under constant supervision of a nurse especially trained for this type of therapy. At the termination of the 5-hour fever the cabinet is opened to permit defervescence, which usually requires about 1 hour. The patient is transferred to bed and the temperature observed hourly until three normal readings (37° C. or 98.6 F.) have been recorded. No restrictions are placed on the patient other than rest in bed for several hours. The majority of patients are discharged from the hospital on the morning following the day of treatment, although a few leave in the evening after the treatment.

Observations Made After Treatment: Patients are to be followed for a period of 5 years, returning to the clinic weekly during the first 8 weeks, monthly for the following 6 months, every 3 months during the next year, and annually thereafter. At each follow-up visit observations are made for clinical evidence of syphilis and blood collected for a quantitative Kahn test. Spinal fluid is collected for examination either before the patient leaves the hospital or at the first return visit.

Results: To date a total of 410 patients has been treated by the method described. 280 have had no treatment for syphilis either prior to or following the specified treatment with fever and mapharsen. Seventy-two of these patients treated according to schedule A have been observed for at least 6 months, 34 being under observation for one year or longer. 122 patients, treated as outlined in schedule B have been followed from 4 to 6 months and the 86 on schedule C have been followed not longer than 4 months. 72 cases treated by schedule A 13 (18.1 per cent) showed clinical relapse, 11 relapses occurring within the first 4 months, 6 were reinfected. The highest percentage of relapses (35 per cent) occurred in the group with secondary syphilis. Of the 122 cases treated by schedule B and injected with a larger amount of mapharsen, 7 (5.7 per cent) have shown clinical relapses to date. 1 case of probable reinfection. The highest percentage of relapses (21 per cent) occurred in the group with secondary syphilis, of the 86 treated by schedule C, only 2 (2.3 per cent) have shown clinical relapse to date. The lowest period of observation is 4 months however. The serologic tests for syphilis carried out subsequent to treatment have shown a similar pattern of reversal. A marked decrease in reagin in the blood of patients with primary and secondary syphilis occurred during the first 2 months after therapy. Thereafter, the disappearance of reagin was much less rapid. In the case of patients treated for the early latent syphilis, the positive serologic test was reversed more slowly than in early syphilis. The blood tests for syphilis on approximately 30 per cent of the patients, observed from 4 months to 1 year, have become negative. Quantitative Kahn tests on the blood of the remaining group still show from 4 to 20 units of reagin depending on the time elapsing between treatment and observation. of the patient. A serologic relapse has occurred in only 4 patients, 3 on schedule A and 1 on schedule B.

The preliminary results obtained from the concurrent use of fever and mapharsen indicate that this mode of therapy compares favorably with other recently described forms of intensive therapy for early syphilis. The results on man have paralleled those obtained in the treatment of experimental syphilis in rabbits. Certain modifications in the procedure were necessary, however. Patients were given a 5-hour fever at 41.1° C. (106 F.) instead of a 3-hour fever at 41.5° C. (106.7 F.) as given to rabbits. Experiments on rabbits carried out in our laboratory have shown that fever enhances the toxicity of arsenical compounds (6).

Our observations on patients have paralleled these findings and indicate that fever practically doubles the toxity of mapharsen. This result is in contrast to that described by Rose, Simpson and Kendall (7), who in a preliminary report on the treatment of human syphilis with fever and arsenicals, stated that fever decreased the toxicity of the drug. The patients treated by the methods described showed no evidence of nephritis which was reported by Thomas, Wexler, Schur and Goldring (8) to occur subsequent to the concurrent use of fever and arsenicals. It should be pointed out however, that the total dose of mapharsen which these investigators administered to their patients was far in excess of the amount employed in the procedure heretofore described. In schedule A, 8 per cent showed evidence of medical shock and 15 per cent exhibited gastro-intestinal symptoms such as nausea, vomiting and diarrhea. Shock did not occur in schedule B but 8 per cent complained of mild headache and vertigo, and 18 per cent gastro-intestinal symptoms which may be attributed to the greater amount of mapharsen administered. Medical shock was not observed in schedule C, gastro-intestinal symptoms occurred only occasionally and a few complained of headache and vertigo. Schedule C produced the least discomfort to the patient and seems so far to be at least equally effective, therefore schedule A and B have been discontinued. The majority of relapses, both clinical and serologic, occurred during the first three months after treatment, most of them developing in patients with secondary syphilis.

Elapses are unusual after the first 4 months, but the final outcome can not be predicted until the end of the 5-year period of observation. The concurrent use of fever and mapharsen offers a number of advantages. The treatment can be completed within 8 hours, and the entire period of hospitalization averages about 48 hours. Of importance is that the patient is usually able to resume work the day following his discharge. Laboratory tests, such as chemical examinations of blood and liver and kidney function tests, are unnecessary. Under the present arrangement, the cost of treatment is about $30.00 per case. severe complications, such as arsenical dermatitis, hepatitis, encephalopathy or renal damage have not occurred among the cases treated. It was necessary to discontinue treatment in only 4 per cent of the cases. The favorable results, the simplicity of the procedure, and the low cost of treatment indicate that the method has merit. Reports of additional observations on this group will be made later.

In commenting on the treatment it appears that the method used in schedule C gives as good results as the more toxic ones. It should be understood that this type treatment although it comes nearer to obtaining the ideal than any other that has been used, is not without hazard and so far can be used only in well-equipped venereal disease centers which have personnel trained to look after the patient.

PEDIATRICS

Infant Feeding in a Rationed Era—by Norman M. MacNeill, Pennsylvania Medical Journal, 47:209 (December 1943).

"Food rationing in the face of a war emergency resolves itself into a rational attempt to apportion available supplies to the best advantage in meeting military and civilian requirements. In the existing emergency rationing has been accepted cheerfully and willingly, and our immediate concern applies itself to a consideration of rationing implicacations in the somewhat narrowed confines of infant feeding.

"Paradoxically, normal infant feeding, better known as breast feeding, constitutes the only dietetic regimen which is not amenable to government decree, for not even the O. P. A. can regulate the production and distribution of breast milk.

"Probably no one has the temerity to challenge the contention that breast feeding represents the safest, the most complete biologically, the most economical, and withal the most satisfactory form of infant feeding. Yet it must be admitted at this time, today, far too few of the babies born in this rationed era are given their nutritional birthright, or when originally given it, are conditioned and allowed to enjoy it to its biologic end. Babies are daily being taken off their mothers' breast for a variety of reasons which were as invalid and unreasonable a century ago as they are today."

The author says daily attendance in an active children's clinic for almost a quarter of a century finds the writer with the reluctant conviction that more practicing physicians know less about infant feeding than any other subject in medicine. How else can one account for the multifarious artificial baby foods used and advertised so effectively, each outdoing the other in its claim to improve on nature and nature's own laboratories: the human breast and the cow's udder?

"Canned milk has its place in our economic and military setup. It represents an invaluable contribution to the dietary regimen of our overseas forces. It is useful for emergency infant feeding during travel, or in communities where fresh milk is not available. Its substitution for fresh milk in localities where fresh milk may be obtained has no justification, and at this time its use entails the utilization of red ration points which might better be employed in rounding out the family dietary budget.

"About the sixth month the eruption of teeth is nature's notification that the infant is being conditioned to cut and chew food. Somewhere between the fourth and fifth months the swallowing mechanism is perfected. The administration of semi-solid cereals and vegetables before this time only too often results in the refusal of the infant to take its milk; and milk, after all, represents the essential factor in its diet at this stage of its development. The recent fad to feed babies semi-solid food at three and four months is harmful, and is without physiologic justification.

"Cooked cereals should be given about the fifth month to assist nature in the perfection of the swallowing act, and cooked fresh vegetables a month later when teeth are beginning to erupt and nature is preparing the cutting and chewing processes."

The author is very emphatic in saying that the emphasis is on cooked fresh vegetables. "It is necessary to make this emphasis at this time because the canned preparations are rationed and require the expenditure of points. However, entirely aside from this fact, it is the writer's conviction that fresh vegetables, home cooked either in a pressure cooker or with a minimum amount of water, have an invaluable and overlooked function in developing the gustatory sense in infants; and that much of the all too prevalent anorexia in later childhood is due to early feeding with sludge-like canned concoctions, very often strained, and consequently calculated to inhibit the normal development of the swallowing mechanism, as well as the gustatory sense, for the development of a satisfactory appetite implies the conditioning of a group of reflexes to the sight, smell, and taste of food, and the sight and smell and taste of some of the commercially prepared foods given infants are poorly calculated to condition reflexes to the appreciation of palatably prepared fresh foods.

"It is an interesting fact that anorexia is an almost nonexistent complaint in Negro children, and it is not an unreasonable assumption that this may be attributed to breast feeding in the early months, supplemented by home-cooked foods in the later months of infancy. Infants whose parents find themselves within low economic brackets are less likely to be the victims of the advertisement pressures which guide their more enlightened and more prosperous neighbors into less satisfactory diet programs, for after all, the infant who is fed on breast milk or on fresh cow's milk with the addition of some home-cooked fruit and vegetables in the later months of infancy is getting a diet which amply provides not only the nutritional cornerstones of protein, fat, and carbohydrate but, as well, the vitamin bridgehead which will carry him safely over into the mixed-feeding period of early childhood.

"Vitamins have a place, and a very essential one, in the nutritional program, but their fulsome exploitation in clever and specious advertising campaigns has caused, and is continuing to cause, a great waste of this valuable food factor in their injudicious and often unnecessary administration.

"Breast-fed babies and those on satisfactory artificial formulas should have their diets fortified by adequate amounts of vitamins C and D beginning at the second month

"The war emergency has demonstrated conclusively that infants and young children can be completely and satisfactorily fed by breast milk, home-cooked vegetables, and when necessary the addition of properly modified fresh cow's milk. Satisfactory infant feeding may be achieved outside of the point rationing program. Infant feeding is the first and oldest occupation in human history, and its importance, elasticity, and applicability are being emphasized today as never before.

"It must be obvious, even to the most confirmed can-feeding isolationist, that for some considerable time enormous quantities of canned food must be directed to our overseas fighting forces and, most certainly in the postwar era, to vast civilian populations. We should, therefore, begin now to condition our infant feeding program to unprocessed food products, not merely because it will give infants more wholesome food but because it will release an almost incalculable amount of processed foods to fronts, both military and civilian, where it is and will be most urgently needed."

COMMENT

We might be just a little more conservative, or shall we say liberal, in some particulars than this author, but in the main we would only emphasize what he had to say relative to this whole subject. The author is evidently not only a well-trained pediatrician, but one with a most valuable store-house of experience to guide him in the care and treatment of infants and children. Like the author we are particularly impressed with the "all-out" effectiveness of the advertisement campaign of commercial concerns relative to their products. For instance we are confronted daily with mothers asking, "How about some karo in the baby's formula?" or "When do we start pablum?" We once heard a great teacher of pediatrics say that when a physician feeds a baby from a can it is self-evident that he does not know how to feed infants properly and adequately. We probably would not completely endorse that statement but in the main he was correct. All in all, this is a fine paper and it deserves serious consideration by the medical profession of this country at this time.

H. F. G.

State Board of Health

Felix J. Underwood, M. D.

POSTPARTUM CARE

by

Eva F. Dodge, M.D., Obstetrical Consultant
Maternal and Child Health Division
Mississippi State Board of Health

Postpartum care means care of the parturient woman, post meaning "after," and partum from the Latin meaning "delivery," or "expulsion from the uterus of the product of gestation." With these definitions in mind, postpartum care then begins immediately following the delivery of the fetus, regardless of the period of gestation. The interpretation of the length of the postpartum period has gone through many changes. Textbooks of the early 19th century mention care immediaely following delivery. As the years went by this time lengthened to 10-14 days, until by the beginning of the new century 4-6 weeks was being considered as the length of the puerperium or postpartum period. During the past few years many obstetricians feel that their patients should be kept under observation from 3 to 12 months following delivery.

If the word "postpartum" was interpreted literally, this period would extend from delivery until conception of the next pregnancy, when a woman would be in the antepartum stage.

Immediate postpartum care is considered to be care of the mother during the first 14 days after delivery. The physician routinely notes the temperature and pulse, the condition of the breasts, height of the fundus, and amount and color of the lochia. While the mother is in the hospital, she is usually seen once or twice a day. When she is at home, she is usually seen every day for the first 4 to 5 days and every other day until 10 days again on the 14th day. Some physicians have the nurse call daily to report the general condition of the mother.

Some obstetricians feel that a vaginal examination at 10 to 14 days is important. If normal involution has not taken place, it can be treated then with greater efficiency than 4 to 6 weeks later.

Six weeks after delivery in the normal woman, involution of the uterus should have taken place, and the uterus should be in normal position. The cervix should be healed. The postpartum examination should include a bimanual examination and an inspection of the cervix through a speculum. A urinalysis, hemoglobin, and blood pressure determination shows the general condition of the woman. Any abnormality of position in size or shape of the uterus can more readily be corrected at this time, than later. A short course of an oxytocic will often increase the involution and stop the discharge. Medical cauterization of the cervix with silver nitrate 5 to 10 per cent or carbolic acid helps to stimulate healing. Cervical erosions in general, if treated at this time heal readily with a few applications. The degree of healing can be determined by application of Lugol's solution to the cervix after the mucus has been gently removed. The glycogen of normal cervical tissue stains dark and strands of new tissue will be noted running inward from the outer edge of the erosion. When erosions do not show this beginning healing after 2 or 3 applications, 4 or 5 days apart, the cervix may be cauterized by an electric cautery. Caution must be used to explain to the patient the necessity for returning to the office in 5 to 7 days. The necrotic pellicle can easily be removed and the annoyance and discomfort of the discharge which would otherwise occur can be avoided. Stenosis of the cervical canal rarely occurs if the patient is seen weekly until the cervix is healed. At each visit the cervix should be wiped off and some mild antiseptic applied to the cervix and to the canal. Some retrodisplacements need to be replaced and held in position by a pessary for varied lengths of time. The milder ones often are corrected when the boggy uterus is involved. Postural exercises such as the knee chest position and the monkey or bear walk, may be helpful.

The same postpartum care should be given following an abortion or premature delivery as for a full-term delivery. Treatment of conditions which may follow the termination of a pregnancy can be readily corrected when seen early and given either curative or preventive measures.

Postpartum care is a part of adequate maternity care which has not been given its share in the total care regime. Many women do not realize its importance and therefore, despite the advice of their physicians, do not return for this important check-up. A great service can be rendered the mothers of our communities when all can be given this care.

* * * * *

DENTAL HEALTH

During 1943, Mouth Health activities of the State Board of Health made a creditable showing in spite of the numerous difficulties imposed by wartime conditions. A report submitted to the Board by Miss Gladys Eyrich. Supervisor of Mouth Health, indicated that inspections were made of approximately 50,000 mouths, prophylaxis was given to 4,482 persons, and 8,890 dental certificates of completed dental corrections were reported. Clinics for indigent children were conducted in 13 counties by 59 dentists. Five schools were 100 per cent in dental corrections: two in Clarksdale and three in Greenville, including the Chinese School there. A photograph and an account of this accomplishment were sent to the dental director in Free China and was published in the Pierre Fauchard Academy dental journal. The senior class of Clarksdale reached 100 per cent in dental certificates before graduation.

* * * * *

VITAL STATISTICS

According to a report of Dr. R. N. Whitfield, Director, Division of Vital Statistics, births in Mississippi showed an increase of 3,000 last year over 1942 while deaths decreased 200 during the same period. There were 3600 fewer marriages in 1943 than in 1942. The total for 1943 was 46,000. However, divorces increased 27 per cent during 1943 over 1942. During 1942 there were 22 deaths from typhoid fever. In, 1943, 21 deaths were reported. Tuberculosis deaths totaled 1092 in 1942. The number in 1943 was 887—a reduction of almost twenty per cent. Diphtheria deaths declined from 44 to 24; malaria from 84 to 74. Automobile accident deaths declined from 421 to 351; and accidental deaths as a whole from 1471 in 1942 to 1407 in 1943. There was a small increase in cancer deaths, from 1537 to 1564—the smallest in years. Heart disease deaths increased from 3169 in 1942 to 3375 in 1943.

PREVALENCE OF COMMUNICABLE DISEASES IN MISSISSIPPI

	April 1944	*April 1943*	*April 5 yr. av.*
Acute Poliomyelitis	2	2	2.8
Bacillary dysentery	482	406	407.8
Dengue	0	4	1.2
Diptheria	16	27	24.8
Influenza	3818	3563	3612.4
Measles	3865	1804	3364.2
Meningococcus meningitis	20	87	26.6
Other forms meningitis	12	5	5.8
Pellagra	261	253	321.8
Pneumonia	1502	1492	1111.0
Pulmonary tuberculosis	123	144	146.2
Scarlet fever	16	88	37.8
Smallpox	0	3	2.6
Tularemia	15	14	8.2
Typhoid fever	5	12	7.2
Typhus fever	6	4	2.8
Undulant fever	5	1	2.6
Whooping cough	1446	1461	1198.0

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The members of the Northeast Mississippi Thirteen Counties Auxiliary had a delightful meeting in Corinth on June 13. Mrs. M. H. Robertson, president of the Alcorn Unit, presided at the luncheon at the Waldron Hotel.

At the business session which followed Mrs. J. Rice Williams, president of the organization, gave an enlightening report of the state meeting to which she was a delegate in Jackson. Mrs. Stanley A. Hill of Corinth. new president-elect of the state organization, presented the chief features of the Wagner-Murray-Dingell bill pending in Congress, and the group voted to urge its defeat to our representatives and senators through influential lay groups.

Officers for the year are: President, Mrs. J. Rice Williams, Houston; president-elect; Mrs. R. L. Wyatt, West Point; first vice-president, Mrs. E. K. Guinn, Okolona; second vice-president, Mrs. I. P. Burdine, Amory; third vice-president, Mrs. L. L. McDougal, Booneville; fourth vice-president, Mrs. W. H. Cleveland, Tupelo; corresponding secretary, Mrs. S. K. Gore, Houston; secretary-treasurer, Mrs. W. L. Orr, Fulton; parliamentarian, Mrs. V. B. Philpot, Tupelo; Doctor's Day chairman, Mrs. B. C. Tubb, Smithville; Legislation chairman, Mrs. Stanley Hill, Corinth; Romance of Medicine chairman, Mrs. W. N. Reed, Amory; Finance chairman, Mrs. T. W. Frazier, Crawford; Public Relations chairman, Mrs. H. A. Stokes, Guntown.

SOUTH MISSISSIPPI AUXILIARY

Early in June the members of the South Mississippi Medical Auxiliary gave a tea in the home of Mrs. R. H. Clark, 3110 Hardy Street, Hattiesburg, honoring the wives of Army doctors stationed at Camp Shelby. About fifty came. This lovely home was lavishly decorated with garden flowers for the occasion, and a collation of dainty foods was served by members of the auxiliary who assisted with the hospitality.

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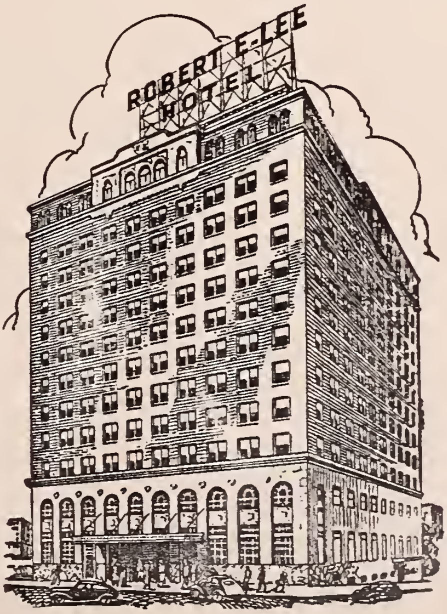

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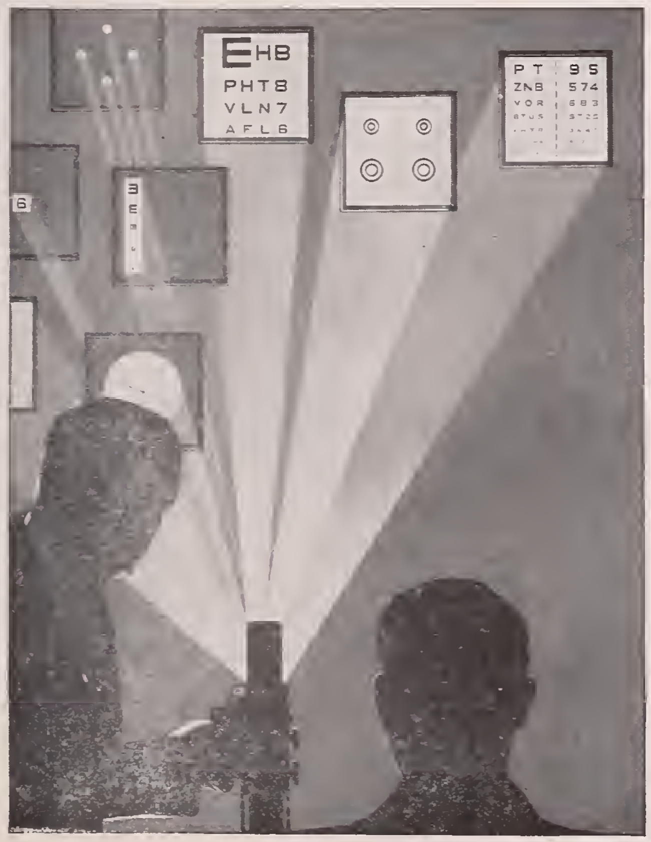

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The Mississippi Doctor

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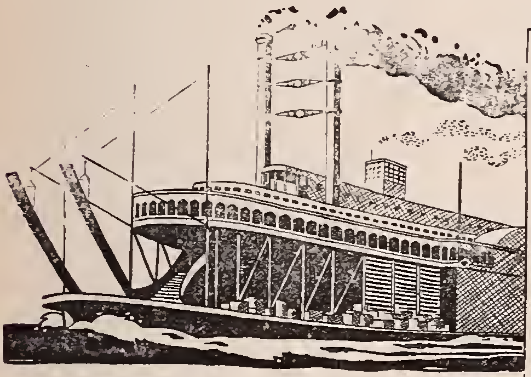

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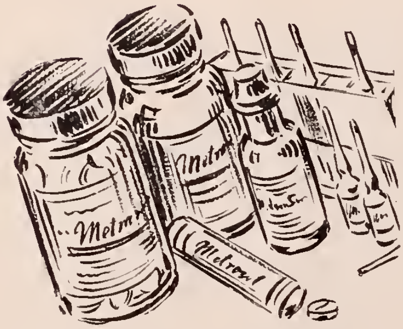

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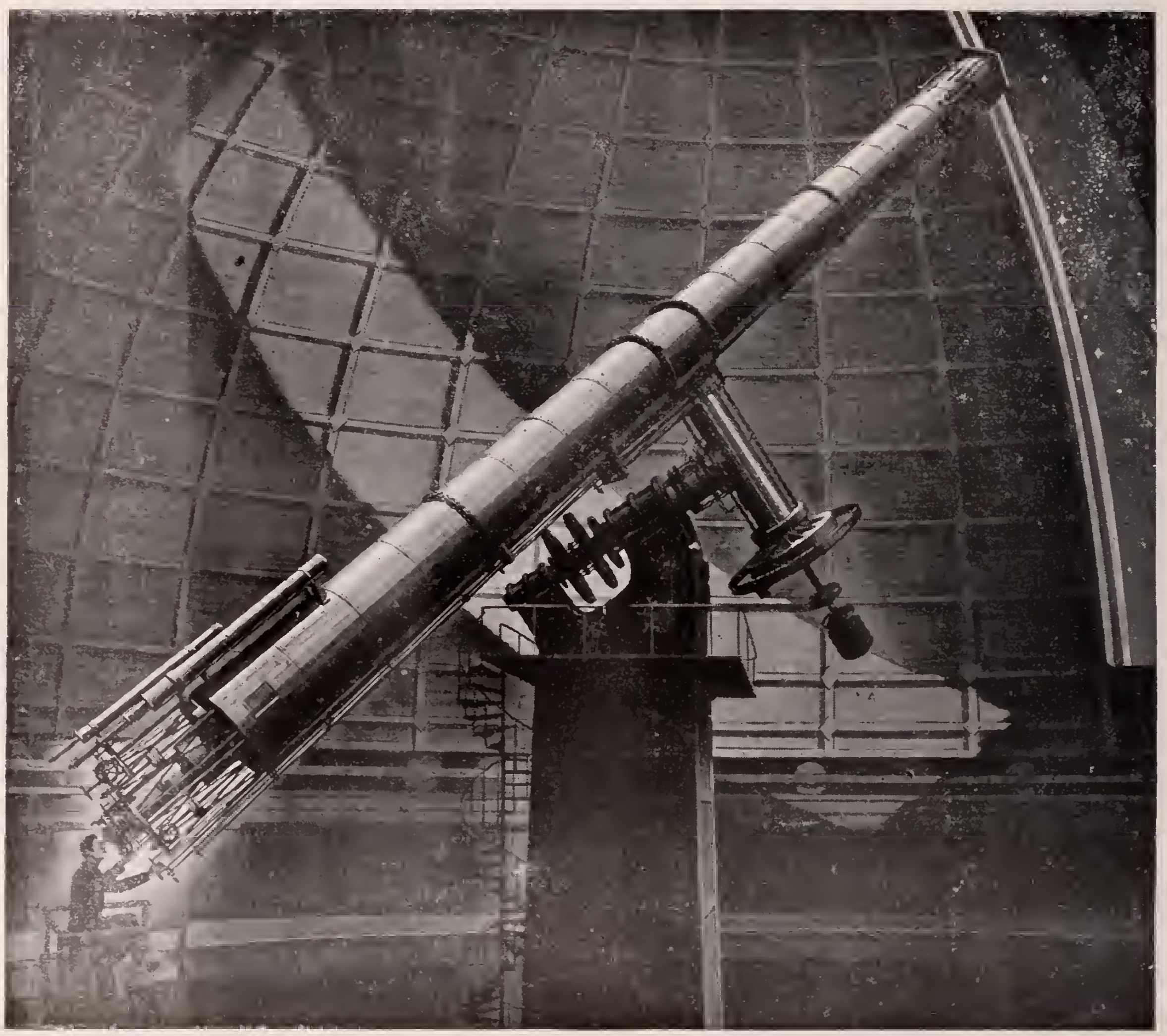

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Primary Bronchiogenic Carcinoma*

(An Analysis of Forty-Four Cases Treated by Pneumonectomy)

ALTON OCHSNER, M.D.; J. LEONARD DIXON, M.D.;
and MICHAEL DEBAKEY, M.D.

The incidence of primary bronchiogenic carcinoma is increasing both relatively and absolutely. Unquestionably, the growing interest in these lesions has resulted in more cases being correctly diagnosed, and the fact that the incidence of pulmonary malignancies has increased in autopsy studies is evidence that the increase is real and not only relative. The incidence of primary pulmonary carcinoma in necropsies performed at the Charity Hospital in New Orleans increased five times in seven years[1]. In 1943 the incidence was 0.47 per cent. In the same period the incidence of carcinoma of the stomach was 2.3 per cent. In 1938 these respective incidences were 2 per cent and 1.9 per cent. Harnett[2] found that whereas the total number of cancer deaths in the British Empire had increased 22 per cent, cancer of the respiratory tract has increased 120 per cent and the deaths from carcinoma of the lung in males from 1921 to 1930 was 21.1 per million as contrasted with 110.9 per million in 1937. Of the 119,804 admissions to the Charity Hospital from the first of January, 1940 to the fifteenth of September, 1943, bronchiogenic carcinoma was diagnosed one hundred and thirty-nine times (11.6 cases per 10,000 admissions). In 98 of these the diagnosis was confirmed by histologic examination, (8.18 cases per 10,000) whereas in 41 the diagnosis was made on clinical findings alone (4.22 cases per 10,000).

Whereas there are a number of factors which are responsible for the increased incidence of bronchiogenic carcinoma, it is our firm belief, as we have emphasized in previous publications [1,3,4,5], that the increased incidence is due to the greater frequency of smoking. Inhalation of smoke constantly repeated over long periods produces chronic irritation of the bronchial mucosa as is evidenced by the characteristically associated cough. Experimentally, the carcinogenic effect of tobacco has been demonstrated repeatedly (6-14). Roffo[12] stated the conviction, on the basis of his clinical observations of 78,000 patients treated in the University Institute for Experimental Medicine for the Study of the Treatment of Cancer in Buenos Aires, that tobacco is the most important factor in determining the localization of cancer. He was able to produce carcinoma by applying tar derived from various tobaccos. Hoffman, on the basis of his statistical analyses of the incidence of cancer, states, "Smoking habits unquestionably increase the liability to cancer of the mouth, the throat, the esophagus, the larynx, and the lung. The change in the cancer death rate during recent years has not, however, been at all disproportionate to the enormous increase in cigarette smoking habit which has replaced the older method of smoking, unquestionably, more injurious than smoking cigars. The increase in cancer of the lung observed in this and many other countries is in all probability to a certain extent directly traceable to the common practice of cigarette smoking and inhalation of cigarette smoke. The latter factors unquestionably increase the danger of cancer development." In an attempt to determine the etiologic relationship between cancer of the lung and inhalation of exhaust gases of the automobiles, we demonstrated previously that there was no direct parallelism between the incidence of bronchiogenic carcinoma and automobile production. On the other hand, there was a definite parallelism between the incidence of bronchiogenic carcinoma and the sale of cigarettes[1]. Whereas it has been considered that certain occupations may predispose to the development of bronchiogenic carcinoma, in the 44 cases in which we performed pneumonectomies for this condition such was not the case, because of this group, 27 (61.4 per cent) worked indoors and 17 (38.6 per cent) worked out of doors.

Bronchiogenic carcinoma is primarily a disease of men. As previously reported by us, in a collected series of 8,575 cases in which the sex was stated, there were 6,769 males (78.9 per cent) and 1,806 females (21 per cent). Thus it is seen that approximately three out of every four carcinomas of the lung affect the male. In 90 cases of bronchiogenic carcinoma which we observed at the Charity Hospital in New Orleans, 78 (86.6 per cent) were men and 12 (13.4 per cent) were women. In 44 cases in which a pneumonectomy was done for bronchiogenic carcinoma, 37 (84.3 per cent) were in men and 7 (15.7 per cent) were in women.

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*From the Department of Surgery, School of Medicine, Tulane University, and the Ochsner Clinic New Orleans, Louisiana.

†Delivered before the Section on Surgery at the Mississippi State Medical Association, May 11, 1944 Jackson, Miss.

Bronchiogenic carcinoma is a disease of older persons. In a series of 4,307 collected cases which were previously collected by us[1], the following results were found: first decade, 0.16 per cent; second decade, 0.7 per cent; third decade, 2.9 per cent; fourth decade, 10.7 per cent; fifth decade, 25.4 per cent; sixth decade, 34.1 per cent; seventh decade 20 per cent; eighth decade, 5.4 per cent; and ninth decade, 0.6 per cent. In 90 cases which we have recently studied at the Charity Hospital, the following age incidences were found: Second decade, 2.2 per cent; third decade, 1.1 per cent; fourth decade, 5.5 per cent; fifth decade, 27.7 per cent; sixth decade, 38.8 per cent; seventh decade, 20 per cent; eighth decade, 3.3 per cent; ninth decade, 1.1 per cent. The average age was fifty-two years. The eldest patient was eighty-three and the youngest was nineteen. As might be imagined, the age of the patients subjected to pneumonectomy was somewhat lower than the other cases of bronchiogenic carcinoma. In our 44 cases of pneumonectomy performed for bronchiogenic carcinoma the ages were as follows: second decade, 4.5 per cent; third decade, 2.3 per cent; fourth decade, 9 per cent; fifth decade, 29.5 per cent; sixth decade, 43.2 per cent; and seventh decade, 11.4 per cent. The youngest patient was nineteen and the eldest patient was sixty-seven years.

Pathology: Bronchiogenic carcinoma occurs more frequently on the right side than on the left. In a series of 4,733 cases which were previously collected from the literature, there were 2,761 (58.3 per cent) tumors involving the right lung and 1,971 (41.6 per cent) involving the left lung. In 90 cases which we studied at the Charity Hospital, the right lung was involved in 50 (55.5 per cent), the left lung in 38 (42.2 per cent), and in 2 (2.2 per cent) both lungs were involved. In the 44 cases in which a pneumonectomy was done, the right lung was involved in 27 (61.4 per cent), the left lung in 17 (38.6 per cent). The site of involvement according to the individual lobe was as follows: the right upper lobe, 12 (27.3 per cent), right upper and middle lobes, 2 (4.5 per cent), right lower lobe, 9 (20.5 per cent), right lower and middle lobes, 2 (4.5 per cent), and left lower, 6 (13.7 per cent). It is thus seen that the upper lobes are involved more frequently than the lower, and the right more frequently than the left.

As previously emphasized by us[16], the modes of metastatic extension of primary bronchiogenic carcinoma of the bronchus are as follows: 1) direct extension, 2) bronchial intraluminal extension, 3) implantation by aspiration biopsy or by operation, 4) hematogenous, and 5) lymphatic. Metastasis in primary carcinoma of the lung as in malignancies elsewhere constitutes the most important single prognostic factor. Unfortunately, at the present time the incidence of metastasis in bronchiogenic carcinoma is high, largely due to the fact that the diagnosis is usually not made until considerable time has elapsed. In a series of 3,047 collected cases which we previously reported[16], the regional lymph nodes were involved in 72.2 per cent, the liver was involved in 33.3 per cent, the pleura in 29.8 per cent, the other lung in 23.3 per cent, the osseous system in 21.3 per cent, the adrenals in 20.3 per cent, the kidneys in 17.5 per cent, the brain in 16.5 per cent, and the heart and pericardium in 12.5 per cent. It is indeed fortunate that most of the metastases are in the regional lymph nodes, which frequently act as a barrier sufficiently long to prevent extension to other parts of the body. This fact is of importance also from the standpoint of therapy, because only by extirpation of the regional lymph nodes can one hope to effect a cure. Overholt[71] found that of 153 cases of primary carcinoma of the lung, of which 145 were verified during life, in only 75 was exploration justified of this group, a curative resection was possible in only 30 cases or 20 per cent. Churchill[18] found that in 155 cases of primary lung cancer, operation appeared feasible in 52 (33.6 per cent), and resection was possible in only 27 (17.4 per cent) of these. In a previous publication[4], we showed that in a collected series of 139 cases, only 68 (49 per cent) were found operable, whereas in our series of 30 cases at that time, 19, (63.3 per cent) were operable In 90 cases recently studied at the Charity Hospital, operation was done in 69 (76.6 per cent), and in 21 (23.4 per cent) operation was not considered feasible. Of the 69 cases in which an operation was done, pneumonectomy was possible in 44 (63.8 per cent), and exploration only in 25 (36.2 per cent). Of the 90 cases of bronchiogenic carcinoma 44 (49.9 per cent) had successful pneumonectomies, 25 (27.8 per cent) were explored and found to be inoperable, and 21 (23.3 per cent) were not considered suited for operation or were treated on the medical service. In the 44 cases in which pneumonectomy was possible, metastases were found in the mediastinal lymph nodes in 23 (52.2 per cent), they were suspected in an additional 11 (25 per cent), and the lymph nodes were free metastasis in 10 (22.7 per cent). Again it must be emphasized that in many of these cases, the patients were not seen until relatively late, which undoubtedly accounts for the relatively high incidence of mediastinal node involvement.

Clinical Picture: Unfortunately, there are no characteristic symptoms of bronchiogenic carcinoma. In a large number of cases there is a history of an antecedent respiratory tract infection. In fact, many of our patients date their illness back to a recent attack of influenza or other lower respiratory tract infection from which they have never completely recovered. In other cases the onset is insidious. The symptoms are frequently disregarded because they are attributed to other causes, particularly smoking. The most frequent symptom of bronchiogenic carcinoma is cough. In our 44 cases in which a pneumonectomy was done, cough was present in 39 (88.6 per cent). Not infrequently the first and most prominent manifestations are those referable to the gastro-intestinal tract. In our series of 44 pneumonectomies, loss of appetite was observed in 25 (57 per cent), previous respiratory infection in 24 (54.5 per cent), hemoptysis in 23 (52.5 per cent), dyspnea in 20 (45.5 per cent), and pain in the chest in 13 (29.5 per cent).

The clinical picture of bronchiogenic carcinoma is so varied that the lesion is likely to be overlooked unless one always considers the possibility of its occurrence. Every respiratory disturbance in a patient past forty years of age which cannot be explained otherwise should be investigated in order to exclude a primary bronchiogenic neoplasm. An acute respiratory infection which does not subside within a reasonable period of time in a patient past forty years of age should be considered as due to a malignant neoplasm of the lung until this has been definitely excluded. The occurrence of a pulmonary abscess in an individual who has not had an antecedent operation or an antecedent acute respiratory tract infection must be considered as being due to malignant disease until proved otherwise.

Diagnosis: The diagnosis of a bronchiogenic carcinoma is generally not difficult if one will only consider the possibility of its existence. As mentioned above, it should be suspected in every case, particularly in a male past forty years of age who has an unexplained respiratory or digestive complaint. In the past undoubtedly most pulmonary carcinomas have been incorrectly diagnosed. Sehrt[19], in 1904, reported only 3.3 per cent of antemortem diagnoses in a series of 178 cases. Careful roentgenograms may show nothing. The roentgenographic interpretation of centrally located lesions is generally more difficult because of the confusion with hilar shadows produced by other lesions and by normal structures. This is particularly significant because most of the pulmonary neoplasms occur in the hilar region. The roentgenographic film may show a shadow produced by the tumor itself, a shadow produced by metastatic mediastinal nodes, or a shadow produced by an atelectatic lung. Occasionally, a very small peripherally located tumor, insufficiently large enough to cast a shadow, will give rise to a large mediastinal mass which may be considered the primary tumor.

Whereas roentgenographic visualization of the tumor or changes produced by the tumor are of importance in suspecting and diagnosing a bronchiogenic neoplasm bronchoscopic visualization of the tumor is particularly important and valuable. Not only does bronchoscopy permit the visualization of the growth in a high percentage of cases, but it also permits the obtaining of a piece of tissue for histologic examination. Unfortunately, bronchoscopy is not performed often enough, as evidenced by the reported statistics. Bronchoscopy was done in only 20 per cent of Koletsky's cases[20], and in 50 per cent of Brine's and Kenning's[21], and King's[22] series. In 90 cases of carcinoma of the lung observed at the Charity Hospital, bronchoscopy was done in 52. Of these 52 cases, no biopsy was done in 20 (38.4 per cent) whereas biopsy was done in 32 (61.6 per cent). Of the 32 cases in which a biopsy was done, the findings were positive in only 9 (28.1 per cent) and were negative in 23 (71.9 per cent). In the 44 cases in which a pneumonectomy was done, the diagnosis was made on clinical findings in all (100 per cent), on radiographic findings in only 18 (44.9 per cent), whereas a positive biopsy obtained by bronchoscopy was made in 14 (31 per cent). In the 44 pneumonectomy cases, a bronchoscopy was done in 38 (84 per cent.) Of the 38 in which a bronchoscopy was done, biopsy was considered possible in 18 (47.4 per cent), whereas no biopsy was done in 20 (52.6 per cent). Of the 18 cases in which a biopsy was done, there was a positive finding in 14 (77.8 per cent), a negative finding in 4 (22.2 per cent). It is thus seen that in the cases in which a tumor could be visualized and a piece of tissue obtained for microscopic examination, the incidence of correct diagnosis was relatively high. Whereas we originally felt that a definite diagnosis of bronchiogenic carcinoma was not justified unless one could obtain a piece of tissue for histologic study, we no longer feel that such is the case and to wait until one can diagnose bronchiogenic carcinoma definitely may mean that the case is allowed to become inoperable. Bronchography is of value in the occasional peripherally located lesion and should be used in all cases in which the lesion cannot be visualized bronchoscopically.

Aspiration biopsy is mentioned only to condemn it. Whereas the obtaining of tumor cells by aspiration biopsy is an excellent way of determining the presence of carcinoma, certainly it should not be done if one contemplates a subsequent operative procedure. We have observed two cases in which seeding has occurred along the tract of the aspirating needle following aspiration biopsy, thus precluding a cure.

The treatment of bronchogenic carcinoma is surgical extirpation because no other method of therapy offers any satisfactory results. The method of choice is removal of the entire lung on the affected side even though the lesion may apparently be limited to a single lobe. As previously reported by us[1,3,4,5], we believe that, although in a number of reported cases simple resection of the involved lobe has been performed, any procedure short of removal of the involved lung is irrational. Only by complete excision of the entire lung can the primary focus be adequately removed. Moreover, lobectomy obviously does not permit removal of the regional lymph nodes. Routinely, we precede pneumonectomy by the production of an artificial pneumothorax, which is of great value. It is performed in stages, the amount of intrapleural pressure being increased gradually until the pressure is definitely on the positive side. It is of diagnostic importance in determining the presence, extent, and location of adhesions, thus permitting the preoperative planning of the operative procedure. Another decided advantage of the preoperative pneumothorax is a gradual compression of the pulmonary capillary bed, which gives the heart time to compensate for the increased peripheral resistance in this area and thus mitigates the sudden change which follows the cutting off of blood to the involved lung at the time of litigation of the pulmonary vessels. This is particularly true in elderly persons whose cardiac reserve is diminished and in whom malignant tumors of the lung are likely to occur. For anesthesia we prefer positive cycloprophane oxygen anesthesia introduced through an intratracheal tube. The incision which we use depends upon the location of the lesion and the extent of the adhesions. If there are few or no adhesions, we use the anterior approach popularized by Rienhoff[23], making an incision in the third intercostal space on the affected side; otherwise, a posterolateral incision, as suggested by Crafoord[24], is employed.

We are convinced that it is imperative to use only individual hilar ligation, because only in this way can the procedure be safely done and the incidence of complication diminished. In a previous publication we[4] showed that the mortality rate in cases in which individual ligation of the hilar structures was done was about half that obtained in cases in which mass ligation was used. Of great importance from a technical standpoint is the covering of the sutured bronchus with pleura in order to prevent the opening of a bronchus, a complication to be feared.

In a previous report[1], we were able to collect from the literature 101 reported pneumonectomies and at that time we added 15 of our own, making a grand total of 116 pneumonectomies for neoplastic disease. In 94 of the collected cases in which a statement was made concerning the outcome, 38 patients recovered and 56 (59.5 per cent) died. At the present time we have been able to collect 241 total pneumonectomies for carcinoma, of which 115 recovered (47.4 per cent), and 126 died (52.2 per cent). If we added to this collected series, our 48 cases of total pneumonectomy,

(We regret that this page was omitted in the printing of your Journal.)

there is a grand total of 289 cases of which 139 (48.1 per cent) lived and 150 (51.9 per cent) died. Whereas the mortality rate in the 94 cases reported before 1939 was 59.9 per cent, in the 147 cases reported since 1939 it was 47.6 per cent, showing a definite decrease in mortality rate with increasing experience. In the 48 cases in which we have performed total pneumonectomy for primary bronchiogenic carcinoma, 24 (50.0 per cent) are living, and 24 (50.0 per cent) are dead. The first patient operated upon in 1936 is still alive and well. Of the 25 patients who died, 12 (25.0 per cent) died in the hospital and 12 (25.0 per cent) died after leaving the hospital. Only 2 (4.2 per cent) of 48 cases had a ruptured bronchus. An additional 6 (12.5 per cent) developed postoperative infection in the form of an empyema. Since 1941, we have had 25 cases in which a total pneumonectomy was done. Of these 25, 17 (68.0 per cent) are living and 8 (32.0 per cent) are dead, showing a definite decrease in the mortality rate over the period antedating 1941. That this decrease in mortality is due to better technique is evidenced by the fact that hospital deaths were greatly lessened whereas the subsequent deaths were little influenced. Whereas of the 23 cases antedating 1941, the hospital rate was 43.4 per cent, in the 25 cases since 1941, the hospital mortality rate was 8 per cent. Undoubtedly the decrease in the number of deaths in the postoperative period is due to better technique and it is reasonable for the fact that the patients survive operation and are able to leave the hospital. The deaths which occur after the patient is discharged from the hospital are usually due to recurrence and progress of the disease elsewhere. In our series of 48 pneumonectomies, of the 23 cases operated upon before 1941, 26 per cent died after leaving the hospital, whereas of the 25 cases operated upon since 1941, 24 per cent died after leaving the hospital.

If one compares the results which we obtained early in our experience with those obtained more recently, both in our own series and in the reported series, it is evident that with improvement in technique which is made possible by the experience gained in treating a large number of these cases, better results are obtained.

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Medical and Pediatric Problems*

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A few weeks ago I selected the topic of my paper but when I began to find time to prepare it many things came to my attention. I know that all of you are aware of them but, perhaps like me, have never stopped long enough to think. Is it very difficult to understand why "they" are trying to force socialized medicine upon us?

In 1940 Dr. Hutton of Chicago presented a paper "The Public, the Politician and the Doctor,"[1] in which he stated: "We must be good doctors, render the best care of which we are capable to every patient, and by constant study make that care as good as can be rendered by anybody under the circumstances." Remember that a great many people feel that almost any wrong can be righted by passing a law. When one of our profession fails to do a good job, he furnishes the opposition with more ammunition or makes another convert to state medicine. We are all penalized by our incompetents."

Dr. C. E. Boyd of Amory presented a paper: "What Is Wrong with Medicine and Whither Are We Going?"[2] that should be read and re-read by many of us who seem to be forgetting our oath of Hippocrates and are operating on every one we see just because the patient has the cash. Alvarez of Mayo Clinic has written along similar lines.

I for one do think that we should accept a great part of the responsibility for approximately one-half of our draftees being unable to meet the physical requirements of our armed forces. Only one in five are able to meet the physical requirements of the Marine Corps. The draftees are supposed to be in the prime of life and according to reports over 90% of disqualifying handicaps could have been prevented or corrected. The late Secretary of the Navy Frank Knox[3] said that to correct this unfortunate condition we must begin before birth, and I agree with him.

Let us take our own county health departments. In 1917 we had 1; in 1930 we had 29; now almost every county in the state has one. At first they began sanitary inspections and educating the people, advising them to see their family doctor for typhoid vaccinations, smallpox and diphtheria immunizations, etc. A few doctors coöperated; others merely said, "I haven't seen a case of smallpox in ten years or a case of typhoid in two years," and, therefore, the health departments had to begin giving immunizations for us. It was not long before they assumed other duties, giving of pertussis vaccine, taking Wassermanns and treating syphilis, etc.

In 1920 there were 2644 cases of typhoid fever in Mississippi; in 1930, 1239; in 1940, 207. In 1920 there were 3148 cases of smallpox; in 1930, 312; in 1940, 18. In 1920 there were 2225 cases of diphtheria; in 1930, 1273; in 1940, 384. In 1920 there were 4180 cases of tuberculosis; in 1930, 3087; in 1940, 1390.

I believe that if the physicians would become unselfish and forget their many jealousies much more could be accomplished.

In 1943 there were a million more babies born than in 1942. Last year Dr. Garrison, as president of the Southern Medical Association, chose for his address "The Nation's Most Valuable Asset and Its Constant Problems"[4]. It was very timely and quite appropriate. An infant born today has 50% better chance of surviving his first year than if he had been born in 1915[5]. The infant death rate for the United States in 1915 was 125; in 1940, 47 per 1000 live births and for Mississippi in 1943, 54.8. In Chicago[6], the 1943 infant death rate was 28.4, 40% lower than the United States. This was due to the coöperation of city physicians, hospitals and the health departments. What has been done in Chicago could be and should be done over the entire United States.

Statistical studies show that the leading preventable causes of infant deaths are prematurity, birth trauma, and infections[7]. From the above you can readily see that the obstetrician has as much if not more responsibility than the pediatrician. I only wish to add my condemnation to the use of pituitrin before the birth of a baby, morphine in the second stage of labor and nembutals and amytals and similar strong stimulants in the first and second stages of labor.

At last we are developing the painless childbirth, continuous caudal analgesia, described by Dr. Lucas[8] last year, offering more to the mother and birth of the living infant believed as Torpin[9] that conservative measures have proved more valuable than more radical ones, and most fortunately, as a rule, those benefiting the mother have been the ones best for the foetus.

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*Read before the section on medicine, Mississippi State Medical Meeting, May 10, 1944. Jackson, Miss.

There are a number of congenital defects that I would like to mention as to proper time for correction, atresia, absence of anus, etc., which should be operated on immediately after birth. It is amazing to find out how well these operations are tolerated.

For harelip, the ideal time is at one month of age or as soon thereafter as feeding is adjusted.

Cleft palate should be done after eighteen months, and if associated with harelip both should not be attempted at one time.

Spinal bifida should be protected so the sac will not rupture (which usually leads to infection) until feeding is adjusted and the infant is gaining weight properly.

Hydrocele will usually disappear before a child is two years old and if it does not, be careful of associated hernia.

Hernia should be treated with proper truss (yarn preferably) and if not cured by two years, operation should be done. All umbilical hernias should be strapped with waterproof adhesive tape as soon as umbilical stump has healed. If we wait until the walking stage it is hard to cure.

Undescended testicle should be left alone until puberty. In the majority of cases it will come down at that time with or without antuitrin S.

Extrophy of bladder should not be corrected until the child is four or five years old, when he is old enough to have proper control of the rectum as the ureters must be implanted into lower colon.

Hypospadias can be corrected after six years, web fingers, three to five years, doing only one at a time. I do not advise operating on web toes, as I have never thought operation would benefit them.

Birthmarks can be removed after one year unless on lips or around eyelids which should have radium or excised as soon as seen[10].

Adenoids should be removed if the child has repeated attacks of otitis, edema under eyes, or disfigurement of nose. Up East adenoids are removed probably two or three times before the tonsils are removed. I have about decided it is a fine idea. This can be done at any age. Tonsils should be removed if infected and causing trouble regardless of age.

I would like to impress on you the importance of not giving the sulfonamides for every ailment that a patient presents. Doctors and druggists are now giving sulfonamide drugs just as they formerly gave calomel and castor oil. Dr. Ainsworth read a paper here last year about damage to kidneys, etc. Cecil, Long, Bliss and many others have condemned these drugs except in special cases. They do not do any good in common colds, influenza, virus pneumonia, etc., and they might do harm. I think it would be better to save them for pneumonia, meningitis, gonorrhea, suppurative otitis, etc.

In closing, I should like to quote a passage from the book, *Better Men for Better Times.*

"Human happiness is the result of the practice of virtue. Peace and contentment are born of self-discipline, which is nothing more than the subordination of all our impulses and inward drives to the law of right reason. . .

"Every day experience bears eloquent and inescapable witness to the fact that they seek for happiness in vain who in the quest lose their own souls or any part of them. The thrill that was expected from the wielding of great power fails to materialize when there is no getting away from the consciousness of inward weakness. The possession of riches cannot compensate for the torturing realization that they were won at the price of honor. No position in society can bring joy to the man who realizes that he has attained it the wrong way and knows life is a living lie.

"On the other hand, there is happiness in the heart of him who prizes a right conscience above public opinion, integrity over personal gain, and who refuses to make compromise with principle, even though by every conventional standard his life might be judged a failure."

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DISCUSSION

Dr. Guy C. Jarrett, (Vicksburg)—There are only a few points that I think need any discussion and these merely to stress some of the points that Dr. Arrington brought out.

For instance, we to often see these cases of congenital cleft palate where the proper treatment and the timely treatment has not been carried out. The harelip should be repaired soon after birth when the baby is established with his formula and is doing well. Some arbitrarily set a date when the child has reached ten pounds in weight, but there are some cases in which that has to be taken care of before even that stage, for instance, if deformity interferes with nursing, the deformity should be repaired earlier so the infant can take the proper food. The cleft palate should be repaired at 15 to 18 months or before the infant begins to talk. When cases are allowed to wait several years, the child will have grown used to an unnatural tone; often when the repair is done it continues. A speech defects teacher should be engaged to train these cases because if they wait until they go to school and are shamed, they begin to develop a complex.

Another thing, this repair work should not be attempted by just anyone, because if the best results are to be obtained it should be done by a doctor who knows what he is doing. If any of you have ever seen a plastic man work on one of these cases, you would think that he is going to build a bridge with the measurements he takes and the plans he makes before he ever cuts the tissue. The same caution holds with the palate as well as the harelip.

In regard to the umbilical hernia, most of these cases will heal themselves if nothing is done, but we never know which one is and which one isn't going to heal, so I think all should be strapped and strapped early. The best method is waterproof adhesive, and I don't think a button or coin should be used, because we have an opening and we have a foreign body with the intestines coming out, and if we are going to take a foreign body in the form of a coin and place over it, we still have a foreign body, so the best procedure is to invert the hernia and pull the skin over and let it heal. You have to do it early for after six or seven months there is such a fibrous ring, strapping is inadequate.

In the undescending testicle, I have never obtained the wonderful results we hear of. After reading of the others' claims, one would think that the nurse might be instructed to give an injection and hold the head down and the testicle will just drop right out. I have never had that experience because I think in most cases we have a hernia and the giving of hormones is not going to touch it. If it has not descended you might give it a trial, and that certainly should be done around ten, eleven, or twelve months.

As to birth marks, we often see the small strawberry type. Lots of them are not obvious in the small strawberry type, but we can see the little vessels under the skin and know what is going to develop. Treatment should be early, because if you wait until they become elevated then excision has to be done. X-ray or radium will cure a large part of them, but treatment must be started early regardless of in what part of the body they are. Particularly on the eyelid, they will grow until there is deformity of the eyelid.

Dr. Arrington spoke of adenoids. We see young infants fifteen or sixteen months old who have early respiratory affections, usually of the upper respiratory tract, and an associated otitis either suppurative or non-suppurative. We are too prone to wait until a certain age to remove them. I don't think there is any harm done in removing adenoids early. Children do not have as many respiratory affections, and consequently the tonsils are not so much affected. If we remove them the chances are they will have to be removed again in several years, but we are giving the child relief and should not hesitate to remove them early.

Advantages of the Multiple Pin Method in Femoral Neck Fractures*

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Since fractures of the femoral neck occur most commonly in the latter decades of life and these patients at best can stand very little shock or trauma, we are keenly interested in the methods promising satisfactory fixation with the minimum damage to the tissue locally and to the patient in general. At the present time there is little controversy in regard to the method of choice in handling these fractures. No external apparatus, cast or traction, can furnish satisfactory immobilization. Regardless of type of splinting the patient is limited in motion, bed rest is necessary, adjacent joints are involved in the fixation and crippling ankylosis occurs much too often. Any apparatus which necessitates absolute bed rest for a debilitated patient past fifty invites death from pneumonia. Too, any patient in this age group who has been active finds it extremely difficult to resign himself to weeks and months as a bed patient.

It is gratifying then, that during the past few years so much progress has been made in the methods of internal fixation of femoral neck fractures. Internal fixation of fragments can be done soon after fracture, pain is eliminated at once and patients can be spared the discomforts of a cast and the dangers of being kept in bed.

Non-union, fibrous union, or absorption of the neck follows when immobilization is incomplete and the trauma of motion is allowed. In the opinion of Austin Moore, who has done much work in the multiple pin method, there is no physiological reason why fractures of the femoral neck should not heal fully as well as fractures at other points of the same patient if the fragments are accurately reduced and reduction perfectly maintained.

Our section of the country at the present time can claim very few orthopedic surgeons and the general surgeons are doing more operative orthopedics. Among these surgeons there has been a certain amount of friendly argument in regard to the type pin preferable in pinning femoral neck fractures and the search has been for the simplest in application, the easiest corrected if an error is made and the one offering the most mechanically correct fixation of the fracture. We feel that the method most nearly answering all of these requirements is the use of from three to five very strong spring-steel stainless pins. These pins are about the thickness of an ordinary match stem, about four and one-half inches long, threaded along the outer half and have a small nut which not only regulates the length but converts the pin into a nail. Certain modification of the Moore method have been found useful by Dr. John T. O'Ferrall of New Orleans, who has successfully used Moore pins in a large number of cases and it was our pleasure to learn these modifications first hand in assisting him and to use them ourselves. At the present time he is using Bohlman pins which are slightly larger and have coarser threads. I have some x-ray plates he sent to me and will show them to illustrate Bohlman pin in position.

On admission the patient is treated for shock if shock is present, an opiate given for pain, x-ray diagnosis made and the patient made as comfortable as possible in bed by means of Buck's extension apparatus and sand bags. Muscle spasm is thus overcome to some extent and less manipulation probably will be necessary when reduction is attempted. If nothing too serious is found to contraindicate operation, the following day a barbiturate is given, followed half an hour later by morphine, the pubic area and whole lower extremity prepared by shaving, then scrubbing with copious amounts of soap and water. The whole extremity is then given the usual antiseptic preparation. If a fracture table is available, traction can be made constant with less effort. If not available, an assistant places his stool at a point where he can keep slight constant traction with the extremity twenty degrees from the midline. The assistant can easily make constant traction throughout the operation if a non-slip knot of thick bandage is placed around the patient's ankle then the two long ends passed beneath the assistant's arms and tied together behind his back so that by simply leaning backward on his stool he tightens the pull on the ankle. In this way his hands are free to rotate the leg as necessary. With this ready the surgeon stands to the outside of the injured leg, holds the ankle with one hand and bends the knee over the other forearm. Flexion then external rotation of the hip is done while constant traction upward is made. The fracture fragments are thus disengaged and shortening corrected. The limb is then carried into internal rotation then completely extended. At this point the fragments may lock into position but slipping is prevented by the assistant at the ankle who keeps slight traction and inward rotation of fifteen degrees while the extremity is held about twenty degrees from the midline. From this point until the final x-ray plate is made for records, the fluoroscope can be of considerable value. The x-ray table can even be used as an operating table and the fluoroscope swung over to check position as often as is necessary. Most of these patients are so slender that fluoroscopic views are fairly clear.

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*Read before the Northeast Mississippi Thirteen Counties Medical Society, March 14, 1944.

After position is checked on x-ray the skin is prepared again, novacaine 1% is injected into soft tissues over the trochanter. Incision is made over the trochanter and slightly above and below it. After exposure of the trochanter the forefinger can be placed anterior to the femoral neck and serve as direction finder in placing the first pin. Beginning well below the trochanter, the pin is started then direction checked by fluoroscope. Position of each pin is checked as it is placed. Lateral views are made by flexing the thigh, abducting and externally rotating the leg so the heel can rest on the opposite thigh. The beginning points of all the nails are fairly close together but the points in the head should be far apart, avoiding the central portion of the neck. If a pin goes into the acetabulum the hip joint becomes locked. No harm is done and the pin is simply withdrawn enough to allow free movement. The original method of Austin Moore called for three pins but after having the engineering department of the University of South Carolina as consultant, he found that four nails properly placed offer even greater support. Each pin point is drilled firmly into the head. After placing all nails and checking by movement of the joint and by x-ray, the excess of the pin is snipped off to about half an inch of the nut then small stainless steel wire twisted about the ends of the pins behind the nuts so that each pin is anchored to all the others. Five grams of sulfanilamide crystals are placed in the wound as closure is made.

The patient is placed in a wheel chair in two or three days and may be on crutches in a few more days. No weight bearing is allowed until five or six months later.

SUMMARY

The multiple pin method seems to offer a considerable number of advantages over that of the commonly used three-flanged nail:

1. The pins are small and adjustable so no assortment of lengths is necessary.
2. No special apparatus is necessary for insertion or withdrawal.
3. No guide or direction finder is required.
4. Change in direction is easy and is done without damage.
5. No damage is done if complete withdrawal and reinsertion is desired.
6. There is almost no danger of splitting the thinnest bone even in an intertrochanteric fracture.
7. Insertion of pins is painless—each is drilled in instead of being driven and there is little noise or impact.
8. Little or no damage is done if a pin is passed into the acetabulum.
9. The tripod position of pins is mechanically sound.
10. Each pin is anchored to at least two others and there is very little chance of a pin working out.
11. Pins are easily removable if infection occurs and removal thought advisable.

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Accident Prevention

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Accidents do not "just happen," they are the result of carelessness or ignorance.

We can scarcely grasp it when we read that 110,000 were killed in accidents, 400,000 were permanently crippled and 10,000,000 suffered temporary disabling injuries last year — this was useless, wasteful and unnecessary slaughter. We shall have a safe and ordered world when each one of us as individuals realizes and accepts his personal responsibilities for accidents.

The Office of War Information reported on April 27 that the number of casualties of the United States Armed Forces from the outbreak of war totaled 192,836. This is a tremendous sacrifice of life but yet it is small when compared to the loss by accidents on the home front.

Toll Fowler, director of Safety Education for Memphis, said he had seen very few, if any, automobile accidents that could not have been avoided. More fatal accidents occur on rural highways than on city streets. About sixty-five per cent of all traffic deaths occur on open roads. About a mile above Deeson I have been watching a stop sign where a byroad comes into the highway and I have noticed that only about one per cent of the cars stop for this sign. There is no doubt that accidents increase as intoxication increases both among drivers and pedestrians. Doctors know that an intoxicated person has decreased inhibitions, deficient sense of care, impaired reaction time and slow response to stimuli, disregard for safety and proper observance of traffic regulations.

Another type of accidents that is increasing is caused by farm machinery. Tractors, gasoline engines and other power machinery are dangerous if used carelessly—especially is this true of mowers, discs, and harvesting machinery with sharp cutting edges. With shortage of experienced labor farmers may put green or inexperienced men on these dangerous machines.

Industry has realized that accidents are unprofitable and cost too much in lost time. Most large companies have a safety council with a safety man, an engineer and M. D., on this council. The safety engineer for the Pennsylvania Railroad said recently in a speech that if all accidents were confined to the employees of the Illinois Central Railroad that company would not be able to operate for five years.

Injuries in home take a big toll in suffering, economic loss and life every year. Today nearly as many people are killed and more than four times as many injured in their homes as by automobiles on the street. Falls in homes occur very often on steps or stairways that are poorly lighted or by objects left on stairways such as skates, marbles, or children's toys. Women use chairs or boxes for ladders and frequently get falls this way. Waxed floors, slippery bathtubs, wet and greasy linoleum are other sources of accidents in homes. Matches left where children can get them are often a cause of serious burns. Bonfires, fireplaces, buckets or kettles of hot liquids left on stoves or tables where children can tip them over is perhaps the most common cause of burns in the home. Asphyxiation and suffocation are most common in winter months but such accidents are rare in this community. They occur from inhalation of carbon monoxide gas which is odorless, colorless and tasteless. Illuminating and cooking gas was formerly a source of many deaths but fortunately death from this cause is rare now. Asphyxiation may also be caused by swallowing an object such as a marble or penny. With guns and pistols in so many homes and so much bird, squirrel, and turkey hunting we should know how to carry a gun properly. The gun that isn't loaded kills many children. We should never leave a shell in a gun that isn't being used and never leave a gun where a child can get it. When you pick up a gun be sure it is not loaded and never point it at a human being.

Poisonings, especially in children, are caused by curiosity as they want to see what a pill or liquid tastes like. Medicines which are safe in prescribed doses may be poisonous in large doses. I had five small children who drank lye last year; luckily none died but all had burned lips and tongues, each the result of parents leaving lye where the children could easily reach it. If I were making laws I would make it a felony to leave lye where children have access to it.

Too many drugs which are potentially dangerous are sold over drug counters daily but Pure Food and Drug laws requiring these drugs to be labeled are helping this. Castor oil may be a perfectly safe drug in many cases but in a case of appendicitis or locked bowel, it may produce death. I know of one case recently where a soldier took sulfathiazole without a doctor's orders on his own prescription and as a result died two weeks later. Some cuts and scratches may cause only inconvenience while others require expensive treatment and result in permanent injuries and death. Piercing injuries that leave a small hole and don't bleed or drain freely nearly always require tetanus antitoxin. Stray dogs and cats are allowed in the home often bring unsuspected dangers and may carry vermin and disease. Electric shock kills many people annually. A coin should never be used to "back" a fuse that has blown out. The fuse is a miniature safety valve as well as a conductor of electricity. We have just had an accident like this that cost the company about $225.00. The National Safety Council as well as the larger insurance companies, and the Red Cross have pioneered in this field. The Red Cross book *Accident Facts* make statistics "walk," "talk," "sit up and beg."

Poison oak or ivy may produce serious illness in persons susceptible to them. Copperhead and coppermouth moccasins and many varieties of rattlesnakes are dangerous, more so now as the so-called antidote which could be produced in a moment's notice is now rare.

According to suggestions issued by the Metropolitan Life Insurance Company, if a placard were posted in each home with the following questions on it, it would be a constant reminder to us:

Have you a cabinet which can be locked, for storing poisons and medicines out of reach of children?

Have you a strong step ladder for reaching heights?

Are halls and stairways safe and well lighted?

Are means taken to prevent rugs from slipping, especially on polished floors?

Are metal boxes provided for storing matches out of reach of children?

Have you a screen for use in front of open fires?

Are all gas pipes tight to prevent leaks?

Are your furnace and stove pipes clean?

Do you have a metal container for hot ashes?

In spite of all laws, safety devices, lectures, talks, and demonstrations, the accident rate is increasing. Some people are prone to accidents just as some children are prone to childhood diseases and psychoanalysts by examination can detect such a tendency in a person. This type of man usually doesn't have only one accident but several. Recently I heard of a case where a good worker was discharged because of the number of small accidents he had had. His employer felt that sooner or later he would have a serious accident, which would cost the company a large sum of money.

Chronic Appendicitis*

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THE SCARCITY of the literature on the subject of chronic appendicitis amply testifies that the interest in it has been on the decline for the past ten years. This is probably due to the development of two schools of thought as to the indications for an appendectomy. These two schools have become so at loggerheads over the subject that apparently each has given up the hope of convincing the other. This complacency is not wholly justified, and in order to prove it we need only to look over the annual reports of some of the larger hospitals of the country, or to review briefly the literature, to be convinced that we are very much in need of a Moses to lead us out of a wilderness of divergent views. I do not think the subject should be considered settled as long as the mistakes in diagnosis run as high as fifty per cent of the patients seen and treated. I believe also that a sufficient number of trials and errors have been made and recorded that we should now be able, from these experiences, to correlate enough facts of positive value to enable us to avoid more of the pitfalls in the diagnosis and treatment than we are now doing.

Those of you who have given it any thought will admit that chronic appendicitis is a term that has been too loosely used. I believe that this is due primarily to the early emphasis that was placed on pain in the right lower abdomen as direct evidence of appendicitis. This belief still has its influence as a part of the tradition of the disease. There is also a source of confusion among surgeons and internists in trying to fix a certain group of symptoms, like pain, indigestion and gas distress, on one organ, and naming it chronic appendicitis, when as a matter of fact many other etiologic factors may be involved in the production of these symptoms. The pathologists have contributed their share toward the confusion, because between them there is also much difference of opinion. Some contend that chronic inflammation of the appendix is a term that should be used to mean simply the remains of an acute infection—an end result—and not an active process, and there are others of equal rank and importance who insist that it can be, and oftentimes is, a continuing process, confined exclusively to the appendix. This phase of the subject interests us chiefly from an academic viewpoint, for we cannot, as clinicians and surgeons, become too much involved with theories, bust must determine from the signs and symptoms presented by a live subject whether or not we are dealing with an appendix that is static, or a going concern, which is making the patient sick and will require removal in order to restore him to good health. There is assuredly cold comfort to the surgeon to remove an appendix and have the pathologist report chronic inflammation, and see his patient return in a few weeks or months with a recurrence of his symptoms. There will, of course, always be a discrepancy between the pathological findings and the clinical symptoms as long as the appendix can remain symptomless and exhibit any or all of the degenerative changes claimed for it, or continue to produce symptoms with few of these changes demonstrable.

The clinical evidence of active chronic inflammatory change within the appendix is usually manifested as local pain and muscle spasm, both together, and because the nerve supply to it is so closely connected with the stomach and liver, epigastric discomfort is usually the most common referred symptom. Quite frequently there are general signs indicative of a mild toxemia, maybe a slight elevation of temperature, and leucocytosis. The objective findings are concerned chiefly with the abdominal reflexes, many of which are extremely unreliable. As a matter of fact there is no orderly array of symptoms upon which to base the diagnosis and in many cases it can only be made by a careful process of exclusion. No direct assistance can be obtained from the x-ray for roentgenologists are becoming more and more reluctant about risking their reputations on a diagnosis of appendicitis from their films. X-ray studies are unquestionably of value in excluding other causes for the symptoms, and of these the intravenous urogram, the plain abdominal film, and the cholecystogram are, in the order mentioned, the most informative. The symptoms that these patients present are due to four types of disturbances, originating with the appendix.

First, a partial blocking of the lumus by concretions, fecaliths, foreign bodies, or by kinks and twists. Interference of drainage in this manner is usually what is seen in a case of appendiceal colic.

Second, intestinal statis, caused by enervation, fatigue, reflected from the chronically irritated appendix.

Third, pylorospasm, which is also due to reflex nerve irritation.

Fourth, toxic absorption from the appendix itself, as shown by loss of appetite, weight and energy, and a general feeling of malaise.

The history of one or more acute attacks, especially if it is over a short period of years, is of course the best single help in arriving at a diagnosis. In fact, there are those who believe that no operation should be advised unless such a history is obtainable. This position, however, is not acceptable, of it would deny to a large number of patients their only chance for relief. It would require the talent of a fortune teller and a detective to uncover many of these acute attacks, and furthermore would assume that such an attack was not only certain of diagnosis, but could be later diagnosed from its history. The basis for a diagnosis of chronic appendicitis should center always on the question of whether or not the patient has had an acute attack, but in the absence of such a history, either recent or remote, it can be made on circumstantial evidence, to adopt a phrase from our lawyer friends, and here we may also accept their view that this is the best evidence available, if it can only be made strong enough. In fixing suspicion upon the appendix, the safest ground always is to assume its innocence until after all complicating elements are thought of and ruled out, with an open mind, in an honest, careful and intelligent manner.

In the preparation of this paper, I had occasion to review statistical data on errors in diagnosis of 787 patients, in whom the diagnosis of chronic appendicitis had been made. These were compiled from reports that I had from several hospitals and surgeons from various parts of the country. The most surprising feature about these reports is that fully twenty-five per cent of the mistakes were made on patients who had disorders of the nervous system or psychopathic disturbances of one kind or another. These were listed as gastro-intestinal neurosis, constitutional inadequacy, hysteria and dementia praecox, to mention a few. Two patients reported were sent to an insane hospital before the wounds had healed from the operation. This group of patients, which comprises one fourth of all the mistakes that were made, should have our most careful attention, and here the greatest single help comes from a complete history, which should include a careful inquiry into the family background for nervous and mental disorders. Such an inquiry will sometimes uncover a great deal that will enable you to avoid many mistakes and very much future embarrassment. The next error which was made most commonly was in mistaking duodenal ulcer for chronic appendicitis; that happened twelve per cent of the time and of course is proof that those patients did not have the benefit of careful radiologic study. Because the lymphatic drainage from the appendix is through the portal system to the liver, there is still a belief that a chronically damaged appendix can start an ulcer going and keep it going, an old theory now abandoned, but not one of these patients with duodenal ulcer was benefited by the operation, and a number were made worse. Irritable colon-mucous colitis and constipation were prominent mistakes made, and the final diagnosis in eight per cent of the cases was one of these conditions. Chronic cholecystitis was responsible for five per cent of the errors and another five per cent were operated on because the x-ray diagnosis was chronic appendicitis, and all of these were wrong. The remaining forty-five per cent of the patients had a multitude of ailments, from a stitch in the side to epilepsy, and to look these over would convince anyone that most of the errors could have been readily avoided by the taking of a good history and the making of a careful physical examination with the hands alone. Now in this connection it should be mentioned and especially stressed that another very potent cause for failure in these cases is insufficient exploration on the operating table, for unless this is done, many times important pathology is overlooked that could be readily cured by extending the incision up or down a little. I believe that in certain types of these cases, especially in the older patient who gives no clear-cut history of ever having had an acute attack of appendicitis, the operation to be proposed should be an exploratory laparotomy rather than an appendectomy. The assumption of this attitude would serve to impress both the surgeon and the patient that the procedure to be undertaken would not necessarily be a simple one, and would eliminate the temptation to do the operation through a one-inch McBurney incision. The diagnosis can be difficult and can be treacherous, and can of course be also quite serious for the patient. It should therefore represent the sum total of a careful clinical, physical, radiological and laboratory examination, judged conservatively and with the proper appraisal of each, for none of the symptoms and findings have unequivocal value.

Without a doubt there are large numbers of cases of chronic appendicitis in young people, that is, patients under the age of 25, who give a history of one or more episodes of what appeared to have been acute attacks of appendicitis within a period of a few years, and who continue to have at regular intervals indigestion, gas distress, loss of energy, perhaps abdominal cramps occasionally, associated with definite soreness about the cecum, in whom simple removal is followed by excellent results.

There is another, but smaller group of cases in whom no history of an acute attack can be uncovered, but who do have paroxysms of colic in the right lower quadrant followed by, or associated with, definite soreness over the cecum, quite regularly after indiscreet eating. These patients have appendiceal colic and at operation the lumen of the appendix is found to be blocked, twisted or kinked in such a way that drainage is interfered with. Operation on these is also followed by splendid results. There is a third group with a syndrome suggesting cholecystitis or peptic ulcer who can be cured by an appendectomy, but this group must be chosen with great care. The patient's history must suggest strongly organic disease of the digestive tract, and, when operation is decided upon the incision must be long enough to explore the abdomen and rule out the presence of ulcer or cholecystitis. Now a fourth group comprises those cases in older patients with long histories and numerous attacks of pain, and when the diagnosis is made in these, the operation should be an exploratory procedure with an incision long enough to inspect with the least amount of trauma all suspicious abdominal viscera. Now we should always beware of the neurotic, with a multiplicity of pains, variously located, and remember that an appendectomy is not a cure for these people and generally they will be made much worse for the experience. There is also another type to avoid, in patients who seem to be all right except for some reason or another there is too much intimacy existing between the cerebral cortex and the right iliac fossa.

The poor results generally obtained from the operation chronic appendicitis may be due primarily to no uniformity of opinion among surgeons and internists as to which patients should, and which patients should not, be operated on. I wish to emphasize again that it is imperative to go about the diagnosis, not by a poke in the side followed by a conclusion, if there is a history of indigestion, but in a methodical manner, before and not after the appendix is removed, if our results are to be improved. I wish to stress the need of eliminating all emotional and mental factors which might enter into the picture, especially if the older patient, and that, once an operation is decided upon in these cases, unless a long enough incision be made to inspect with the least amount of trauma all of the suspicious abdominal viscera, the patient has not had the proper surgery.

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*Read before the semi-annual meeting of the Delta Medical Society, December 1943.

TUBERCULOSIS AMONG VETERANS

During first World War inductions, knowledge and facilities for diagnosis were insufficient to screen out many men suffering from tuberculosis, particularly presymptomatic disease.

During fiscal year 1942, after almost a quarter century, hospital admissions numbered 9,658. Over 300,000 such admissions and readmissions have accrued in hospitals of the Veterans' Administration or other government, state or civil institutions since the last war.

Despite the admirable services available to tuberculosis veterans, the experience of their hospitals has been unfavorable. Thus, in 1942, of the 9,854 cases discharged from these hospitals, only 1.9 per cent were designated "arrested" at discharge; 0.3 per cent "apparently arrested," and 0.8 per cent "quiescent"—a bare total of 3 per cent medically rehabilitated. The remaining discharges included "condition improved" 32.7 per cent; "condition unimproved" 28.9 per cent; "dead" 19.5 per cent; and "condition not stated" 16.0 per cent. The vast majority were obviously not ready for release. So-called "improved" cases represent, predominantly, patients with unstable lesions, a large proportion leaving the hospital without authorization or consent. Thus, the Veterans' Administration itself classified the hospitalization of 58 per cent of the cases as "incomplete." These 1942 figures are rather typical, though somewhat worse than those of earlier years.

A genuine effort must be made to protect the large crop of tuberculous veterans inevitable from the present war. It is likely that the Veterans' Administration will function under regulations and procedures governing the care of veterans of World War I. Already, many of the tuberculous veterans of the new war show the same restlessness and abandonment of hospital care which have produced calamitous results among the older men. With new cases already numerous, the stage may be set for another great medical tragedy. Lack of discipline and mistaken generosity may not only take their toll of young men who deserve to get well and resume useful lives, but may seriously delay control of tuberculosis in the general population—unless we act!

Function of the Health Officer in the Control of Tuberculosis among Veterans, Louis I Dublin, Ph.D., Amer. Jour. of Pub. Health, Dec., 1943.

The Mississippi Doctor

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Manuscripts and material for publication under the Mississippi State Medical Association should be received not later than the twentieth of the month preceding publication. Address material to Lawrence W. Long, M.D., Suite 412 Standard Life Building, Jackson, Mississippi.

FOUR-YEAR MEDICAL SCHOOL

Mississippi can easily have one of the most practical, streamlined, medical schools in the United States if we can only catch the vision and apply practical means to accomplish the end. First, the people of the state must be aroused to the needs of a first-class medical school and they must have the desire for it; then the medical profession must show the way in the construction and the operation. It must be united desire and united effort backed by urgent need.

The medical school and the central hospital should be staffed with the best in the profession and kept from political control. There must be active coöperation between the medical center and the hospital system throughout the state in the application of total medical service to all the people.

If all the people in the state become interested in a medical school we shall have one of the most modern, efficiently equipped and operated in the United States. It might therefore be a school for the entire state and should help to give better medical service to everyone.

The Southern Medical Association is scheduled to hold its regular annual session in Saint Louis in November. This is the wise thing to do. Medical information must be kept liquid and unrationed.

Doctors continue to ask us about the Mid-South Postgraduate Medical Assembly, if it will meet next year. It seems a bit irregular that we can not have a two-day streamlined meeting for our busy practitioners. New Orleans is having their four-day Assembly right along with excellent attendance and it is doing a fine work while the Mid-South Assembly sleeps. Our state meeting had one of its very best sessions this year. Reports are similar from other medical groups.

In World War I, of the men wounded and not killed outright nine per cent died. In our present war only 2 per cent have died. Human plasma, the sulfa drugs and immediate and efficient service on the front lines have made the difference.

What we have done and are doing in the army can and must be done on the civil firing lines. Airplanes, trucks, farm machinery, factories are multiplying emergency medicine throughout the world. We really have no rural communities when it comes to emergency medicine. We must not render useless our medical health chain by defective links in the rural community and small town, where quick and efficient action is most important and where it has not yet been supplied as it should be. It is good human economy for every person in the United States to have the best there is in medicine.

The higher-ups in the medical profession have profession have been slow to get beyond the base hospitals in civil practice. Because the work is hard and the pay short, many doctors have not even sniffed the smoke of battle at the front. Anywhere Uncle Sam sends a summons to call the boys to die on the battlefield the best in medicine must go. At home the well equipped, well supported small hospital affiliated with the larger bases and with a senior consultant service is the answer to the civil need. To say that a twenty-five bed hospital can not and should not have interns indicates lack of medical vision, medical courage and practical application.

We are very grateful to the many doctors in the mid-South territory who have renewed their subscriptions to the journal. Your loyalty and your support is a great help. We appreciate the men who are carrying courtesy cards, and our advertisers who are taking space with us. White's Laboratories will be with us soon with a full-page advertisement for which we are very grateful. We appreciate expressions from one and all for our effort to render constructive service in giving the best there is in medicine to all our people.

While I have never been one who wished that time might turn backward in its flight, I am sometimes forced to regret the speed with which it passes. I have never admitted to myself or others, that I am growing old. Yet I sometimes feel a sense of loneliness when I remember that so many of my friends of yesteryears have passed on. Time was when I numbered among my best friends, in the city of Memphis alone, W. B. Rogers, B. G. Henning, J. B. McElroy, Frank Smythe, Frank Jones, J. A. Crisler, Battle Malone and others who are gone. Among the "old guard" but few are left. Among these I am constrained to mention E. M. Holder, E. C. Ellett, and J. L. McGehee. All these men labored long and well —they made their lives sublime and their footprints in the sands of time can be seen easily by those who follow them. When I survey the field in Mississippi the same situation prevails. However the list of friends, whom I have loved and lost in that field, is too long to mention individually, although the memory of each will never fade. Their friendship has sweetened and glorified my life.

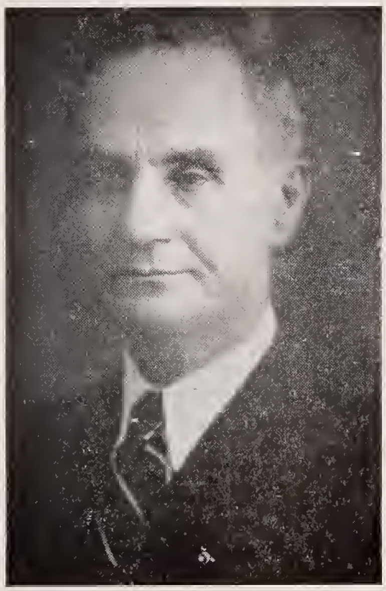
So much for a backward glance. It will not be denied by any one that all these men to whom I have referred wrought well in the field of medicine. But medicine is not a fixed science, it is progressive. Many basic changes will yet be made. There can be no doubt that there is a shortage in the supply of physicians now and the prospects are that this shortage will grow more acute in the near future. Just how this shortage must be met is problematical. It is true that there is some indication that the war will not continue indefinitely. Still, most of the younger men in the service will be needed for rehabilitation and general veteran's work. Those who are older will find it difficult to relocate and reorient themselves. They will more likely feel that they have served their day and generation and will prefer calling it a day.

In addition to the definite shortage in doctors, I fear that we face an economic crisis. I have felt for many years that such a crisis was at hand. I see no reason to change my thinking now. For the duration of the war, we in the United States have been fed on a soporific. We have seen and had more money than at any time in our history. This condition will not continue indefinitely. All this money will soon be collected into the coffers of a few. What then of the masses? They, I fear, will be reduced to serfdom again. You note that I say again; for that was the condition during the years just preceding 1933. In my thinking the trouble is in our financial system. Money does not have, never did have, and never can have any intrinsic value. Yet under our system we assume that it has. And by juggling and sleight of hand methods all the money is gathered into the hands of a few. Then it is that depression and suffering become general. Our people as a rule are patient and long-suffering. But there is a time when patience ceases to be a virtue. Then it is that rebellion and revolution arise. Heretofore war has come to divert public attention from the real issue. This time some ten millions of our youth have gone into the service (most of them willingly). Many thousands of them have died, other thousands have lost their station in life and will return as flotsam and jetsam. But millions of them will return wiser if not better men. These millions will want to know and will have the right to demand to know, why they should be sacrificed if they are not to have some definite reward. They will soon see that a few who made no sacrifice have become so entrenched and enriched that they can control the destinies of all others. Then it will be, I fear, when our national trouble will begin. I do not want to think of what may then take place. The war has been skillfully and wisely directed, but I shudder when I think of the possible mishandling of the peace for which we all long and pray. Patrick Henry exclaimed "Give me liberty or give me death!" and fired the people and gave birth to our nation. Would that some prophet may arise who could electrify all our people and arouse a national sense of justice to all before the entrenched interests shall have brought fratricidal bloodshed upon us and with it the destruction of our great government.

My thinking is diverted from medicine, but we all should consider ourselves as watchmen on the tower, and feel that we are charged with the duty of sounding the alarm when we believe that danger is threatening.

G. S. B.

With the Half-Century Club



DR. J. RICE WILLIAMS
Houston, Miss.

DR. C. M. MURRY
Ripley, Miss.

Dr. J. Rice Williams, another north Mississippi physician who has been active for fifty years, is still an outstanding leader in our state association. For individuality, rugged honesty, and medical integrity he might be termed the Abraham Lincoln of the Association. He is speaker of the House of Delegates of our state association. He knows the last word in parliamentary procedure and handles tight places with more than finèsse. He has an intuitive heart and a projecting mind that enables him to guide the affairs of the house over the perilous shoals to safe landing without even waking many of the passengers. He is a born diplomat, possessing the quietness of a lamb, and the courage of a lion when principle demands it. He understands the value of harmony in any organization. He is keen witted, his sense of humor bubbles up like a spring far up the hillside. He is loved and esteemed by his fellow doctors. He thinks that "the Half Century Club is worthwhile for keeping in touch with yester-year."

He drinks deep from the fountain of human philosophy. He is an example of the belief that "To do or to refrain from doing anything because friends or foe does, is evidence of weakness." This a good sound piece of original philosophy. In the 1943 *Masonic Digest* you will find more of it.

Dr. J. Rice was born on August 3, 1867. He graduated from the University of Tennessee in 1894, and from the University of Nashville in 1896. He took special x-ray work in Memphis in 1923.

"The work we love to do physics pain." In his Masonic work and in his x-ray work in medicine he is very busy and very happy as he marches along the highway of service nearing the station of fourscore.

DR. C. M. MURRY

Ripley, Miss.

"Dr. Charlie," as he is effectionately known by many, is one of the "half century boys." Dr. Murry graduated from Jefferson Medical College in 1890. His father, Dr. John Y. was a graduate of Jefferson also. He began practice in Ripley in 1849 and remained steadily at his post 51 years. Dr. Will Murry, brother to Charlie, practiced in Tippah County 52 years, making 94 years of continuous service by this family in Ripley. Dr. Vance Murry, son of Charlie, graduated from Tulane in 1932. He is now in the armed forces. C. M. Jr., will graduate from Jefferson Medical this coming September.

Dr. C. M. Murry joined the State Medical Association just as soon as he received his license and has been a member ever since and has a wonderful record of attendance. He has practiced for six generations in some families. He has observed the part of heredity in families, the degenerates, the bleeders, the sparks of greatness or genius, as these traits and tendencies pass through several generations.

In 1905 he gave saline under the skin to a woman with pernicious vomiting who had kept little food for 55 days. He simply boiled his water, put in two drams of salt to the quart and gave it under the shoulder blade with a large syringe. The next day she was able to retain food and then proceeded to term all right. In 1898, in the home by himself, he did a large incarcerated hernia on a man who had been vomiting fecal matter for two days. The man not only survived the operation, but lived about seven years. He was seventy-eight when operated.

Dr. Murry was a member of the State Board of Health from 1896 to 1900. He served with the late Dr. H. A. Gant. In 1898 he attended a convention in Atlanta where six other states were represented and where yellow fever was the chief topic. Dr. R. D. Murray was a prominent figure at this meeting. He advanced the idea at this meeting that it would be reasonably safe for people to come and go, attend to their business in the daytime, if they would keep moving, not lie down and go to sleep. He had in mind that the mosquito or some insect that was more active at night was the means of conveying the disease from one person to another. He mentioned a group of men in a yellow fever area going through on this plan. All but one, he got drunk and slept out overnight, escaped the disease.

Dr. Murry served Tippah County for about 30 years as county health officer. One day he and his staff vaccinated 1600 people against typhoid, he doing 500 one afternoon. No bad arms showed up in the crowd.

When Doctor Murry began practice in the state there were only two hospitals within its bounds, one at Vicksburg and one at Natchez. We now have 88 on the accredited list.

When asked about the danger of state medicine, Dr. Murry expressed the idea that if it does come the profession will be largely responsible for it by having commercialized the practice of medicine. He has never made a rule to give his services freely to the poor. He believes in doctors charging in proportion to what people can pay. He thinks that insurance would be a big help for the people in the lower income brackets.

Dr. Murry was present at the luncheon in Jackson and in fact was about the youngest looking man on the list, even with 54 years behind him in the noble profession.

Dr. Murry has been an active member of the Masonic Lodge since 1890. He possesses a wonderful memory, is courtly and courteous, a physician deeply devoted to the profession and to his family.

Mississippi now has one active doctor to every 2348 people.

Fifty years ago Mississippi had two hospitals, now she has 88 on the accredited list.

News and Comment

ANNOUNCEMENT

Drs. Gamble Brothers and Archer, Greenville, Miss., announce that Doctors Hugh A. Gamble and Paul G. Gamble have recovered from their recent illness and have resumed work.

Also, associated with that clinic's practice after July 1 are Dr. H. H. Roth, surgery, former resident in Charity Hospital, New Orleans, La., and Mayo's Clinic, Rochester Minn., Dr. K. P. Mangold, surgery, graduate Royal College of Surgeons, Royal College of Physicians, Edinburgh; and the Royal College of Physicians and Surgeons, Glasgow, and recently in charge of all major surgery in Davidson County Hospital, Nashville, Tenn.; and Dr. Eric F. Turkel, urological surgery, graduate University Vienna, diplomate of the National Board, who has also pursued extensive postgraduate studies in this country.

OFFER SUPPORT

The following resolution was submitted to the State Board of Health, endorsing the proposed four-year medical school:

> WHEREAS, The Mississippi Federation of Business and Professional Women's Clubs very strongly endorses and advocates better health facilities in Mississippi for every citizen, be it therefore
>
> Resolved, That each member of the Federation be urged to put forth a special effort to see that this program is promoted in each community, using this as a main project of the Federation for the next few years, and be it further
>
> Resolved, That we heartily endorse and advocate the establishment of municipal, county or district hospitals in those communities where needed; and, further, the establishment in our state of a four-year medical school, and a central hospital in connection therewith, in order to encourage medical students to locate in our state for practice at the completion of their preparation.

Book Reviews

LIPPINCOTT'S QUICK REFERENCE BOOK FOR MEDICINE AND SURGERY, by George E. Rehberger, A.B., M.D. twelfth edition, 1460 pages. Published by J. D. Lippincott Co., Philadelphia. Price $15.00.

More than twenty years ago a country practitioner, after practicing for many years in an isolated section, brought together between two covers a compilation of medical knowledge designed particularly to meet the needs of the busy practitioner. Many doctors do not have one of these editions, and many would be grateful indeed to possess so valuable a source. The practitioner, confronted with the whole gamut of varying diseases, more than any other man in the profession, needs a sifting of the modern literature, a well-arranged reference for emergencies, and a complete treatment for practical needs.

Four years have elapsed since the last edition, but in this last are the new discoveries and developments brought completely up to date. The dictionary feature of the book is the most attractive. Thumb labels for the eleven divisions—general medicine and surgery, genito-urinary disease, obstetrics, skin diseases, diseases of the eye, nose, throat, orthopedics, and drugs—are supplemented by an alphabetical arrangement of each disease or disorder. A ready index provides help in the back of the volume.

For these days of limited study and review of the literature, as well as complication of medical knowledge and treatment, no better reference can be found for the office than *Lippincott's Quick Reference Book for Medicine and Surgery.* It is a busy practitioner's own solution to the country doctor's limited time, means, or facility for consulting many authorities. It comes nearer to offering a broad and thorough treatment immediately usable than any other work available.

THE ANALYSIS AND INTERPRETATION OF SYMPTOMS, by Gyril M. McBryde. Published by J. B. Lippincott Company, Philadelphia. Price $4.00.

This is a most interesting and helpful book for either practitioner or surgeon. Dr. McBryde has edited the papers, dividing them by subjects. Especially noteworthy are: fever

Dr. Paul B. Benson, Atlanta; **Nervousness and Fatigue**, Edwin F. Gildea, St. Louis; **Headache**, Harold G. Wolf, New York;**Thoracic Pain**, John R. Smith, St. Louis; **The Differential Diagnosis of the Conditions Which Produce Cough and Hemoptysis**, David M. Skilling, St. Louis; **Abdominal Pain**, Sara M. Jourdan, Boston, Mass.; **Hematemesis and Melena**, Leon Schiff, Cincinnati; **Joint Pain**, R. H. Freyberg, Ann Arbor; **Obesity**, Gyrill M. MacBride, St. Louis. Each subject is treated in a most concise and definite manner as to cause, pathology and differential diagnosis. The book is practical and unique. It has something definite and worth while for every man interested in medicine. The practitioner especially will find it a handy book for his desk.

PRACTICAL MALARIA CONTROL, a handbook for Field Workers, by Carl E. M. Gunther, M.D., B. S., D.T.M. Published by Philosophical Library, Inc., New York, N. Y. Price $2.50.

This little book of 91 pages is so interesting and so eloquent with facts that it reads like a romance. More than ever before the entire world is interested in malaria, its treatment and its control, its elimination. If the facts in this little book about malaria were common knowledge, a big step forward for its control would be on the way. Dr. Gunther states that more than five million people die in the world each year of malaria. The author discusses the elimination of malaria and its control. He gives most interesting facts about the breeding habits of the anopheles mosquito, how one variety prefers one type of breeding place, another a short distance away likes another type. Methods of treating the breeding places of the mosquito are discussed in a most concise manner.

The diagnosis of malaria is given liberal space along with the six clinical forms, as are the complications of malaria and other diseases. The discussion of differential diagnosis is most interesting and informative. Essential facts are given on making the films, the stains to use, and how to examine the film, Under Part Three, treatment, ten general principles are discussed. The action of the various drugs, quinine, atebrin, and plasmoquine, are among the important ones. Consideration of the evaluation and discussion of the relative merits of the various anti-malarial drugs is given. Standard treatments are outlined with special treatment for special cases and complications. The author gives an interesting discussion on malarial pregnancy.

Lastly are discussed the complications of malaria, including black water fever wth its ideology, etc.

Since the machine age in which we live has made the world one small community, the control of malaria is many times more important than it has ever been. Surely, every doctor in our state should read Dr. Gunther's little book *Practical Malaria Control.*

FUNDAMENTALS OF PSYCHIATRY, by Edward A. Strecker, M.D., Sc.D., F.A.C P., Professor of Psychiatry, University of Pennsylvania.' Second edition. Published by J. B. Lippincott Company, Philadelphia. Price $3.00.

Not only in the field of medicine is an allowance made for the psychiatric component in any illness, but in all walks of life it is being recognized. An understanding of the mental influences on behavior is therefore of concern to persons in executive position or wherever there is the responsibility of working with many people. This little book is prepared for the layman also, briefly and clearly written, indexed and complete with glossary of terms used.

Seldom does the physician fail to acknowledge the mental and emotional forces in disease nowadays. This book examines the physical causes of mental states and their repercussions on the body. It explores the common causes of psychoses and explains methods of treatment, including alcoholism, hysteria, melancholia, paranoia, and the "most serious disease menace of modern civilization"—schizophrenia.

Fundamentals of Psychiatry is written mainly to give the reader as well as the physician new understanding of himself, his fellow human beings, and will aid anyone in achieving necessary adjustments to the world in which we live today.

SMALL COMMUNITY HOSPITALS by Henry J. Southmayd and Geddis Smith. Published by the Commonwealth Fund, 41 East 57th Street, New York 22, N. Y. Price, $2.00.

It is encouraging to see at last that men and means who can do something about a proposition are seeing the medical, social, and economical value of the small community hospital. For many years it has been the hope of medicine for the masses. It is hoped that it will be used in the future not only to treat patients out on the civil firing lines, but that it will be recognized and utilized as a teaching center for a part of the intern's course that he may know how to practice medicine when he goes to the small town and rural community, and that he may acquire more respect for human life. It is hoped that it will be recognized as the one greatest means to stabilize distribution of doctors.

This little book is full of fine information giving the humanitarian side of furnishing medical service to the needy and the neglected in the small town and rural community and the value of the hospital as an aid to get doctors to work together and to give the people better medical service. Is shows also how it adds to the health security and contentment of the people. The authors discuss workable plans for the organization of the hospital staff, the construction of the building, the cost, and upkeep, how to handle the indigent patient as well as the one who pays. The most important suggestion made in the book is that the large hospital might do well to have its interns take some of their training out in the small hospital. This is the one thing that will help most to rectify our distribution of doctors.

The Commonwealth heads have done some wonderful medical service, but they are still overshooting the mark in the amount of money they put in the small hospital and in some of their requirements. Marble halls and tile floors do not heal wounds. Better medical service at less cost should be studied by one and all. This little book should be read by every doctor in the United States. The president of all medical schools and the higher-ups in the American Medical Association should be compelled to read it if they do not do it voluntarily. We must have an affiliation and medical unity of effort of all of our medical forces if we, the profession, are to give the best medical service available.

Deaths

IN MEMORIAM

Dr. Charles Emmitt Walker died June 26, 1944, at Sanatorium, Mississippi, of coronary thrombosis of short duration. He was born in Ripley, Lauderdale County, Tennessee, January 10, 1890. He received his primary education in Ripley schools and Bellbuckle Academy. He received his medical degree from the University of Tennessee in 1916, and following this served one year in the Charity Hospital in Jackson, Mississippi.

In World War I he was commissioned as first lieutenant in the Medical Corps and was sent to France shortly afterward. While serving in France he developed pulmonary tuberculosis and was honorably discharged from the Medical Corps in July, 1918. He was inactive in his medical practice for two years, due to his disability developed in France. He became interested in tuberculosis from his own misfortune and applied for a position in the comparatively new institution for the treatment of tuberculosis in Mississippi.

Dr. Walker began his life work in May, 1920, as a member of the medical staff of the Mississippi State Sanatorium, where he devoted his entire time to diagnosis. He was chief of the diagnostic clinic and examined thousands of people in the state. His was the difficult task of informing many individuals that they had tuberculosis. His also was the joyful task of telling many that they were well or that they did not have tuberculosis. He became very proficient in the diagnosis and treatment of this disease, and was considered one of the most outstanding diagnosticians of chest diseases in the South. Soon after becoming a member of the medical staff at the Sanatorium, at that time in its infancy, he was appointed assistant superintendent and as such served throughout the growth of the institution to its present place as one of the outstanding institutions for the diagnosis and treatment of tuberculosis in the United States. His service was a credit not only to the institution but to the medical profession and the state as well.

Dr. Walker was an active member of the Methodist church, a Mason, a member of the American Legion, Central Medical Society, Mississippi Medical Association, Southern Medical Association, American Medical Association, and the American Trudeau Society.

Dr. Walker was united in marriage to Miss Carmen Parker on February 6, 1921, and is survived by his wife and the following children: Lt. Charles Walker, Jr., of the Air Corps, Parker Walker, Midshipman in the U. S. Navy, Robert Dean Walker, student, and one daughter, Miss Jane Walker, of Sanatorium. He also leaves his father, one brother, and a sister of Ripley, Tennessee.

The staff of the Mississippi State Sanatorium does hereby request that a copy of this memorial be written in the staff minutes, and that a copy be sent to the family, along with our most sincere regrets and sympathy of our beloved fellow-worker.

Respectfully submitted,

E. D. KEMP, M. D., *Chairman*
RAY H. BIGGS, M. D.
T. J. BURNHAM, D. D. S.
Committee

Mississippi State Medical Association

	Society	President	Secretary	Time of Meeting
FIRST COUNCILOR DISTRICT J. W. Lucas, Moorehead, Councilor Bolivar, Coahoma, Humphreys, Leflore' Quitman Sunflower, Tallahatchie, Tunica, Washington.	Clarksdale and Six	W. H. Williams, *Tunica*	Guy R. Post, *Clarksdale*	2nd Wed. March and November
	Delta Medical	John G. Archer, *Greenville*	J. C. Russell, *Cleveland*	2nd Wed. March and November
SECOND COUNCILOR DISTRICT L. L. Minor, Rt. 4, *Memphis*, Councilor Benton, DeSoto, Lafayette. Marshall, Panola Tate, Tippah, Union, Yalobusha.	Desoto	C. W. Emerson, Hernando	L. L. Minor, Rt. 4, Memphis	First Mon. Jan., Apr., Jul., Oct.
	Tate	W. D. Smith, Senatobia	M. M. Powell, Jr., Coldwater	Second Wednesday
	North Mississippi		A. H. Little, Oxford	3rd Wed., Jan., April, July, Oct.
THIRD COUNCILOR DISTRICT R. B. Caldwell, *Baldwyn*, Councilor Alcorn, Calhoun, Chickasaw, Clay, Itawamba Lee, Lowndes, Monroe, Noxubee, Oktibbeha Pontotoc, Prentiss, Tishomingo.	Northeast Miss.	H. A. Stokes, Guntown	A. J. Stacy, Tupelo	Sec. Tue., Mar., June, Sep., Dec
	Alcorn			Third Friday 6:30 p.m.
	Lee			2nd Monday night
	Prentiss			1st Monday night
FOURTH COUNCILOR DISTRICT W. H. Curry, *Eupora*, Councilor Attala, Carroll, Choctaw, Grenada, Holmes Montgomery, Webster.	Winona District	Edgar Giles, Avalon	J. W. Bailey, Kosciusko	Semiannually
	Webster		H. K. Curry, Eupora	
FIFTH COUNCILOR DISTRICT H. C. Ricks, *Jackson*, Councilor Claiborne, Hinds, Issaquena, Leake, Madison Rankin, Scott, Sharkey, Simpson, Smith Warren, Yazoo.	Central	John Harter, Sanatorium	J. G. Thompson, Jackson	First Tuesday 6:30 p.m.
	Claiborne		D. M. Segrest, Port Gibson	
	Issa-Shar-War.	A. J. Messina, Vicksburg	W. K. Purks, Vicksburg	Sec. Tues. each month
SIXTH COUNCILOR DISTRICT Lamar Arrington, Meridian, Councilor Clark, Kemper, Lauderdale, Newton, Neshoba Winston.	East Mississippi		R. L. Simmons, Meridian	
SEVENTH COUNCILOR DISTRICT R. F. Ratliff, *Lucedale*, Councilor Covington, Forrest. George, Green, Jasper Jefferson Davis, Jones, Lamar, Marion, Pearl River, Perry, Wayne.	South Mississippi		J. P. Culpepper, Hattiesburg	3rd Tues., Mar., June, Sep., Dec.
	Amite		W. T. Thornhill, Crosby	
	Franklin		L. Costly, Meadville	
	Homochitto Valley		L. S. Gaudet, Natchez	Semiannually, Natchez
	Jefferson		W. T. Harper, Fayette	Second Thursday
	Pike		W. F. Cotten, McComb	Monthly, McComb
	Tri-County	Thomas Burk, *Hazelhurst*	R. B. Zeller, Hazelhurst	Quarterly (Rotating)
EIGHTH COUNCILOR DISTRICT W. H. Frizell, *Brookhaven*, Councilor Adams, Amite, Copiah. Franklin, Jefferson Lawrence, Lincoln, Pike, Walthall, Wilkinson. . .	Coast Counties	S. B. McIlwain, *Pascagoula*	D. L. Hollis, Biloxi	1st Wed. each month
NINTH COUNCILOR DISTRICT Dan J. Williams, *Gulfport*, Councilor Hancock, Harrison, Jackson, Stone.	Wilkinson		S. E. Field, Centerville.	

Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—James G. Thompson, Jackson.

Ear, Nose and Throat—Edley Jones, Vicksburg.

Obstetrics and Gynecology—J. F. Lucas, Greenwood.

Orthopedics—Thomas H. Blake, Jackson.

Pathology and Clinical Pathology—John C. Henthorne, Vicksburg.

Pediatrics—Harvey F. Garrison, Jackson.

Public Health—Felix J. Underwood, Jackson.

Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

Discussion and comments are invited.

PEDIATRICS

CONTRIBUTION TO THE STUDY OF RITTER'S EXFOLIATIVE DERMATITIS IN THE NEW-BORN—Mendoza, E. S., Genatois, T. Lander, M. and Arroyo P., H. — Revista de sanidad y asistencia social, 8: 937 (October) 1943.

It may be said that exfoliate dermatitis in the newborn, called by German authors "Ritter's disease," is a grave condition which must be differentiated from pemphigus neonatorum and desquamating erythroderma of Leiner's disease.

The authors report five cases of exfoliate dermatitis in the newborn and say that the condition is characterized by vascular lesions which may involve the face, neck, trunk and extremities. After rupture of the vesicles a desquamating process follows. The skin assumes an aspect of scalded skin. The condition may start with erythema. Later on the skin assumes a red color and the lesion is weeping. Frequently there is dyspepsia, frequent liquid defecations and loss of weight.

Microscopic examination shows epidermis, fibrinous exudate, mononuclear cells, probably belonging to the lymphoid group and few neutrophils.

Fever is usually absent.

The condition has also been termed "acute epidermolysis of the newborn," diffuse pemphigoid" or "exfoliate pemphagoid." The condition usually begins around the mouth and has its onset between the second and fifth weeks after birth. The vesicles have a tendency to be confluent. Instead of the vesicular form, the first phase of the condition may appear in the form of fine desquamation followed first by erythema and later on by an extensive exfoliation. As to general symptoms, nutritional disturbances, loss of weight, vomiting and diarrhea are characteristic. The temperature usually remains normal. Some writers believe that the condition represents a malignant variety of pemphigus neonatorum because only quantitative differences can be found in histologic specimens. Finkelstein, however, emphasizes essential differences; the dermatitis commences on the face while pemphigus usually appears first on the trunk; dermatitis appears in the form of one attack while pemphigus may show successive eruptions; pemphigus is frequent, dematitis rare.

In Leiner's disease of desquamating erythroderma there are no vesicles, the lesion is not weeping and there is no epidermolysis; desquamation takes place in the form of large lamellae.

The condition should not be confused with so-called sebaceous ichthyosis of the newborn which is a benign, noncontagious condition.

The mortality ranges from 48 to 52 per cent and is usually caused by complications in the form of digestive disturbances.

Until the introduction of sulfonamide drugs the treatment consisted of applications of dessiccating powders, such as zinc oxide or talcum. The authors employed sulfanilamide or similar preparations in the form of local applications of ointments or parenteral injections. Moreover, vitamins were employed, particularly vitamins A, D, C and B complex.

The authors are inclined to believe that various aforementioned conditions represent distinct clinical forms of the same nosologic entity. Certain constitutional factors predispose to dermatotropic manifestation which may be of an infectious or nutritional origin. This explains the apparent difference between Ritter's dermatitis and Leiner's disease.

As to the etiology, an infection caused staphylococci, streptococci, enterococci, etc., is the responsible factor.

COMMENT

We felt that it would be of interest to abstract this article since it is rather a severe disease, and one that has caused the death of a great many infants. It can be controlled now must better than formerly by the use of a sulfathiazole ointment, and also a powder composed of sulfathiazole, bismuth subcarbonate, with a small amount of boric acid and starch sufficient to make a dusting powder. This may be used on the surface both for comfort and a curative measure. A 5% sulfathiazole ointment applied at night is usually sufficient to cure the disease.

State Board of Health

Felix J. Underwood, M. D.

MATERNAL AND CHILD HEALTH ACTIVITIES*

1943-1944

VIRGINIA HOWARD, M.D., Director

Maternal and Child Health Division

It seems an encouraging trend that maternal and child health is receiving the concern and attention it now commands of physicians and public health forces throughout the nation. Mortality rates have been sharply reduced. In Mississippi, births showed an increase of 3,000 in 1943 over 1942, while deaths decreased 200 during the same period. It is gratifying that new impetus has been given to life-saving programs in the face of the huge mortality statistics being reported from the areas of war.

Outstanding among the activities of the Mississippi Division of Maternal and Child Health during 1943-1944 were:

1. The inauguration of the Emergency Maternal and Infant Care Program for wives and infants of men now serving in the armed forces
2. The opening of the Child Guidance Center under the direction of Dr. Estelle A. Magiera,
3. The addition to the state-wide Maternal Health Program of certain activities in response to the ten resolutions on Maternal Health of the 1943 Mississippi State Medical Association Meeting,
4. The post-graduate training of Mississippi physicians in obstetrics, gynecology and pediatrics,
5. The inspection of maternity and nursery hospitals and clinic facilities,
6. The prenatal and postpartum nursing and medical maternity services, infant, preschool, and school examinations of the sixty-five health departments.

Emergency Maternity and Infant Care Program

The Mississippi Emergency Maternity and Infant Care Program was inaugurated April 14, 1943, after hundreds of requests had been received during the preceding months from wives of Mississippi men serving in the armed forces. Through the coöperation of 592 Mississippi physicians and 98 hospitals and clinics, 7,470 applications to this program have been received as of May 15, 1944.

An attempt has been made to encourage adequate prenatal care and post-partum care as well as care at the time of delivery in these cases. Physicians have been asked to take routine serological tests on the expectant mothers coming to their attention. The approximately 3,000 one-page medical records already returned by them constitute a picture of obstetrical practices in Mississippi never before obtainable. These records for each county will be available soon in an abstract suitable for discussion by the local medical society.

The gratitude of most of these young mothers, the interest manifested by their physicians, and the reassurance of good care which could be passed on to their husbands, has been more than adequate compensation for the time-consuming detail involved. Approximately 75 per cent of the time of the Maternal and Child Health staff was required to operate this program.

Child Guidance Center

In September 1943, Mississippi became one of the only four state health departments in the country to have as an integral part of its public health program a Child Guidance Center for the diagnosis and treatment of the behavior disorders of children. These minor disorders of children have far-reaching effects in later life and their prevention will do much to lessen the incidence of major psychoses, juvenile delinquency, and mal-adjustments.

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*(Report submitted to the State Board of Health at its semi-annual meeting, May 31, 1944.)

The staff of the center consists of Dr. Estelle A. Magiera, a psychiatrist who has just completed a year's study in child psychiatry at the Judge Baker Foundation in Boston, Massachusetts, a psychologist, Miss Louise Wood, a psychiatric social worker, Miss Mary Watts, and a secretary.

In the first eight months of its operation, monthly branch centers in addition to the Jackson Center, were established at the following points: Meridian, Columbus, Tupelo, Greenville, Greenwood, Hattiesburg, Pascagoula, and Gulfport.

Numerous requests for other centers are being received which the already busy program makes it impossible to grant. The current interest in the problems of juvenile delinquency makes it all the more fortunate that Mississippi is now one of the few states to have such a service.

Maternal Health Services

In May 1943, the Maternal and Child Health Committee of the Mississippi State Medical Association presented a list of ten resolutions which were unanimously adopted. During the fall and winter of 1943-1944 the Division of Maternal and Child Health was fortunate to have loaned to it the services of a nurse, Miss LeVan, and an obstetrician, Dr. Eva Dodge, to begin application of these resolutions.

During the last eight months work has been done on all of the resolutions except one, that of the study of maternal deaths, and forms for beginning this study have now been completed.

One of the significant achievements has been the teaching of contraceptive techniques to physicians and health officers in the following sixteen counties: Forrest, Hinds, Harrison, Jackson, Adams, Wilkinson, Sunflower, Marshall, Washington, Coahoma, Leflore, Yazoo, Union, DeSoto, Jones, and Tate.

Mississippi still needs to progress in matters pertaining to maternal health even though the last available study of maternal mortality rates shows the lowest rate, 4.2 per 1,000 births ever experienced in the state. Studies and new techniques such as are outlined above will do much to lower the rates even further.

Post-graduate Training of Mississippi Physicians

During 1943-1944 Mississippi physicians continued to avail themselves in large numbers of the opportunity for further training in the field of maternal and child health through fellowships provided by the State Board of Health. A number of Mississippi physicians attended obstetric and gynecology and pediatric courses, at Tulane University School of Medicine.

Many letters of approval have been subsequently received from these men expressing their interest in further training and commenting upon the usefulness of the material presented. Three courses in pediatrics and two courses in obstetrics and gynecology have been held recently.

Inspection of Maternity and Nursery Hospital Facilities

Coincidently with the beginning of the Mississippi Emergency Maternity and Infant Care program, a hospital inspection plan was put into operation to insure the meeting of certain minimum standards of care as outlined by the Children's Bureau. Through the voluntary coöperation of Mississippi institutions 98 hospitals and clinics now have facilities which have been approved as safe for delivery of mothers and the care of new-born infants.

As a consequence, this work of the Maternal and Child Health Division has been of great value in protecting the health of many mothers other than those who applied to the EMIC program. It has resulted in many changes in the physical layout of maternity wards and nursing, as well as in the addition of necessary equipment such as incubators for the premature infant. In view of the considerable increase in hospital deliveries this function of the division is all the more important.

During 1943, 9,680 women were admitted to the antepartum medical services and made a total of 13,020 visits. There were 11,029 who made a total of 14,369 antepartum or postpartum visits to the medical maternity clinics of the health departments.

During the same year 24,087 mothers were admitted to the antepartum nursing services. A total of 49,211 visits were made to these mothers by public health nurses and sixty-five public health units.

During the same period of time, 3,869 infants were included in the total of 7,084 visits to the medical, infant and preschool conferences: 17,817 infants were admitted to nursing services and 31,599 preschool children received nursing care through the health department.

A total of 85,759 visits were made to infant and preschool children in Mississippi; 82,279 school children were inspected by physicians and nurses during the year; 31,729 were examined by physicians; 8,384 nursing visits were made to school children and 41,803 school children received inspection by dentists or dental hygienists. These figures represent a slight decrease over those for 1942.

PREVALENCE OF COMMUNICABLE DISEASES IN MISSISSIPPI

	May 1944	*May 1943*	*May 5 yr. av.*
Acute Poliomyelitis	6	5	3.4
Bacillary dysentery	1030	1610	1199.8
Dengue	0	0	2.8
Diptheria	24	14	18.0
Influenza	1714	1564	1571.6
Measles	2125	910	2111.4
Meningococcus meningitis	33	42	17.2
Other forms meningitis	9	6	4.0
Pellagra	286	269	372.0
Pneumonia	834	748	575.2
Pulmonary tuberculosis	151	180	146.4
Scarlet fever	21	30	19.2
Smallpox	3	3	3.6
Tularemia	19	1	6.2
Typhoid fever	11	8	8.6
Typhus fever	12	4	4.2
Undulant fever	8	1	3.4
Whooping cough	1492	1789	1371.8

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Woman's Auxiliary

TO THE MISSISSIPPI STATE MEDICAL ASS'N

President .... Mrs. L. J. Clark
Vicksburg

President-Elect .... Mrs. Stanley Hill
Corinth

First Vice-President ....Mrs. H. C. Ricks
Jackson

Second Vice-President .... Mrs. Henry Boswell
Sanatorium

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Historian .... Mrs. Harvey Garrison
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FROM THE PRESIDENT

We are at the beginning of another year in the history of the Auxiliary and I trust that in the months that follow I may serve you well, conscientiously promoting and extending the aims and ideals of this fine organization. I am happy to extend greetings to you auxiliary members, scattered throughout this great state of ours. During the year I hope that many new names will be added to the roll.

You have convincingly demonstrated throughout the years your loyalty to the Auxiliary and I sincerely express the hope that I may merit the same degree of your faithfulness to enable me with your help to maintain this high standard of work and service that the Auxiliary has always stood for. There is much to be done and now as never before we must accept the duties that arise and show our doctors that we are equal to the difficult tasks assigned us.

The danger of governmental regimentation of medicine is upon us and what are we going to do about it? The quality of our membership is such that we may well be able to influence other organizations in the danger of the control of medicine by the government. The effect of our educational work upon the line of thought in other groups is surely to be felt and recognized.

Since health education is one of our major projects, we should make greater efforts to increase the subscribers to **Hygeia.** I hope that the Auxiliaries will try to give subscriptions to the schools in their counties. It may be necessary to raise funds to pay for these gifts but it can be done.

With so much propaganda circulating it is more necessary than ever before that public relations be stressed and emphasized.

The subscribers to the **Bulletin** increased last year but in order to have more informed members and kep in closer contact with the National Auxiliary the number will have to increase. Our membership will be better informed and more successful programs and activities can be carried on with the help of the **Bulletin.**

I wish to thank you for the confidence placed in me as president. I trust I shall not fail and in the perilous days ahead with your coöperation go forward in harmonious fellowship with a new vision of hope and courage to the tasks that lie ahead.

GREETING FROM DR. CRAWFORD

(Given in part by the president-elect of the Mississippi State Medical Association, Dr. Lampton B. Crawford, Tylertown, Miss., in addressing the members of the Auxiliary at the state meeting in May.)

You are not only a benefaction to humanity, but you are enabling us to do our best for mankind. Although not mentioned nor implied in chronicles concerning our noted men, the wife is the mirror-goddess of the doctor's life, reflecting and directing his earnest, humble effort to be serviceable to his fellowman in the magic manner which makes, of every doctor, a great man. Back of every illustrious man you will find a superior woman; in like manner, in the last analysis, every great movement for the well-being of society has had its rise in the heart of a woman.

Today the medical profession is faced with many problems and keeping in touch with these problems is like painting a picture, a veritable moving picture with a wonderful panorama of constantly changing scenery. Doctors' wives are expected to keep up with the advance in medicine, or, at least, to keep in hailing distance of it. Through the Woman's Auxiliary to the Mississippi State Medical Association this can best be accomplished. Here the wives of present day physicians not only pledge their support to the profession, but endeavor to be useful. 'It is always a thrill to see what women are doing and what they can do.' 'It adds to the already firm conviction that women are becoming more and more of an influence in every walk of life.' 'O Woman! lovely woman! Nature made thee to temper man; we had been brutes without you. Angels are painted fair, to look like you; there is in you all that we believe of heaven — Amazing brightness, purity, and truth; eternal joy and everlasting love.' "

PRESIDENT'S ADDRESS AT ANNUAL MEETING

(The following is in substance the excellent summary of activity and the interpretation of the heart of Auxilary work given by Mrs. H. C. Ricks, Jackson, Miss., outgoing president of the state organization.)

To the members of the Auxiliary and a most efficient and coöperative executive board, let me say "Thank you with all my heart for the assistance you have given me during the past year." Without your timely help and never failing counsel the yearly goal might have fallen far short of being reached.

To have served as your president, has been one of my greatest privileges and I shall always cherish the honors that have been mine and the gracious courtesies I have received.

This has been a year of study and hard work for me and has made of me a better and more intelligent Auxiliary member.

Our Auxiliary has come of age this year. We have passed through the experimental stage. We have continued to grow in interest as well as numbers and our field of work should appeal to every member in the state who has the doctors' interest at heart.

Because of our "all-out war effort," our time has been diverted and, in many instances, our Auxiliary activities have become secondary, yet we have not failed in either. Having many interests, a physician's wife soon learns to budget her time as, in her bridal days, she learned to budget her finances. And so we have served our Auxiliary as we have served our country, giving of our time and talents to both.

We have interested ourselves in legislative matters pertaining to the practice of medicine. Knowing that our auxiliary has great influence in guarding our political heritages, we have resolved to be alert to help prevent legislation of a fallacious nature.

Real happiness comes when we forget self in doing for others and we have earned this happiness by taking advantage of every opportunity to lighten the burden of our doctors. Health education being one of our objectives, we have tried to create a better understanding between the profession and the laity by spreading the gospel of health.

The old saying "All work and no play makes Jack a dull boy" is still true and we have not neglected the social part. Friendship is the basis upon which our Auxiliary is founded. For after all

"It's the human touch in life that counts
The touch of your hand on mine
Which means more to the fainting heart
Than shelter or bread or wine.
For shelter is over when night is gone
And bread lasts but a day,
But the clasp of the hand, and the sound of the voice
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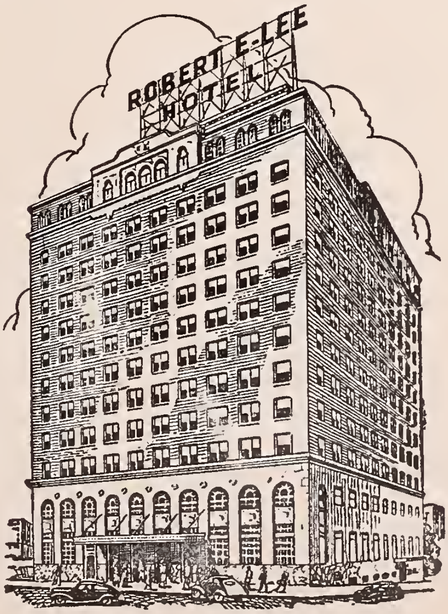

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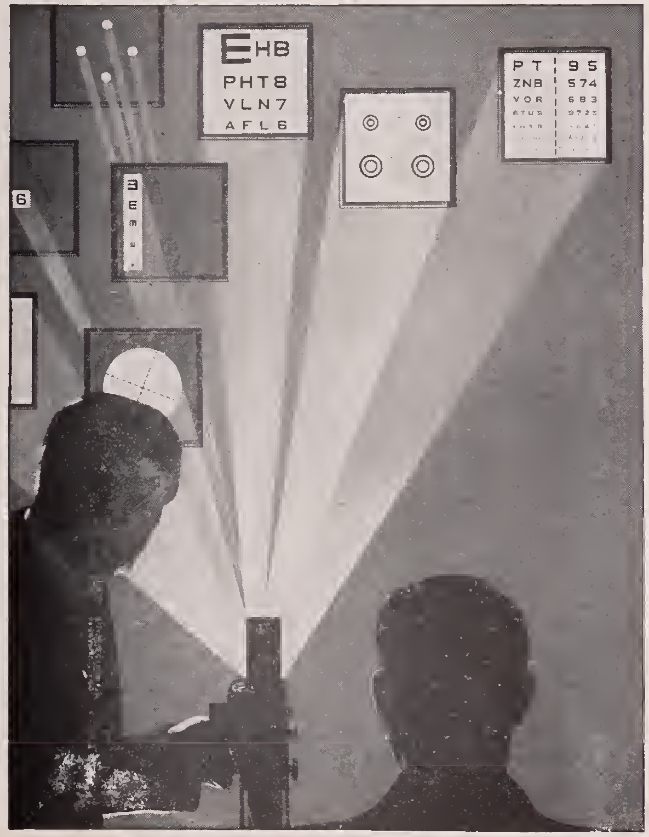

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VOL. 22 BOONEVILLE, MISSISSIPPI, AUGUST, 1944 NO. 3

Taps

By Claude Eager Johnson

§

We are too young to die!
Our boyish dreams have merest fledgling wings
That brought each heart brief joys to which it clings;
Our boyish deeds late had such baby feet
They barely ran small errands down our street;
Our fleeting days have been too short for sleep
To tempt these eyes to close—they vainly weep
For youthful hopes which reach out hungry hands
To keep their hold on life whose precious sands
Are running low within the fatal glass
While sky-borne ships drone murder as they pass.
But if our death connote world freedom's birth,
O thou receiving, resurrecting Earth,
We are not then too young to die!

(The author is a native of Mississippi, formerly of Clinton, now living in Waco, Texas).

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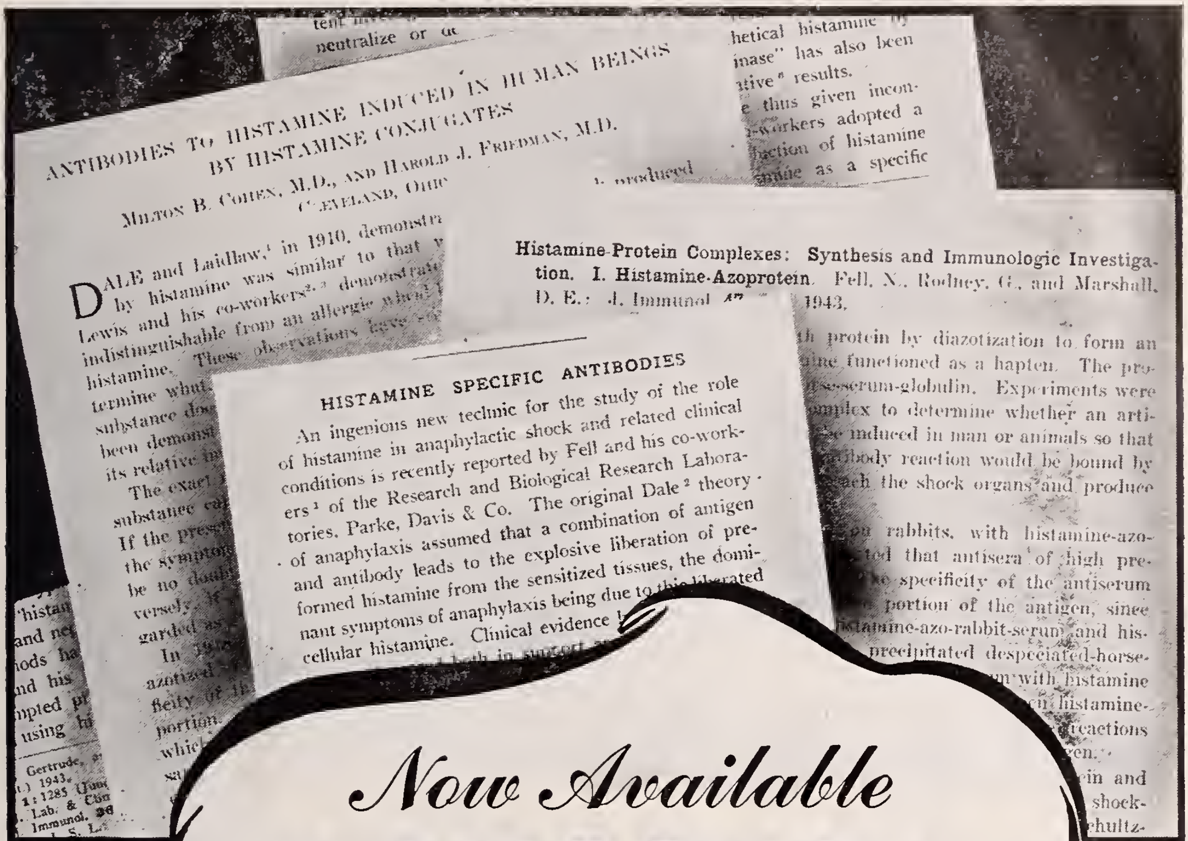

tent ... neutralize or ...

ANTIBODIES TO HISTAMINE INDUCED IN HUMAN BEINGS BY HISTAMINE CONJUGATES

MILTON B. COHEN, M.D., AND HAROLD J. FRIEDMAN, M.D.
CLEVELAND, OHIO

DALE and Laidlaw,[1] in 1910, demonstra... by histamine was similar to that ... Lewis and his co-workers[2,3] demonstrat... indistinguishable from an allergic wheal ... histamine. These observations have ...

termine what ... substance do... been demonst... its relative im... The exact ... substance ca... If the pres... the symptom... be no doubt... versely... garded as... In 19... azotized ... ficity of th... portion... which...

hetical histamine ... inase" has also been ...tive[4] results. ... thus given incon... workers adopted a ...faction of histamine ...mine as a specific ... produced

Histamine-Protein Complexes: Synthesis and Immunologic Investigation. I. Histamine-Azoprotein. Fell, N., Rodney, G., and Marshall, D. E.: J. Immunol 47 ... 1943.

...h protein by diazotization to form an ...ine functioned as a hapten. The pro... ...-serum-globulin. Experiments were ...plex to determine whether an arti... ...e induced in man or animals so that ...tibody reaction would be bound by ...ach the shock organs and produce ... rabbits, with histamine-azo... ...ted that antisera of high pre... ...o specificity of the antiserum ... portion of the antigen, since ...istamine-azo-rabbit-serum and his... precipitated despeciated-horse... ...um with histamine ... histamine-... reactions ...gen. ...in and shock-... ...hultz-

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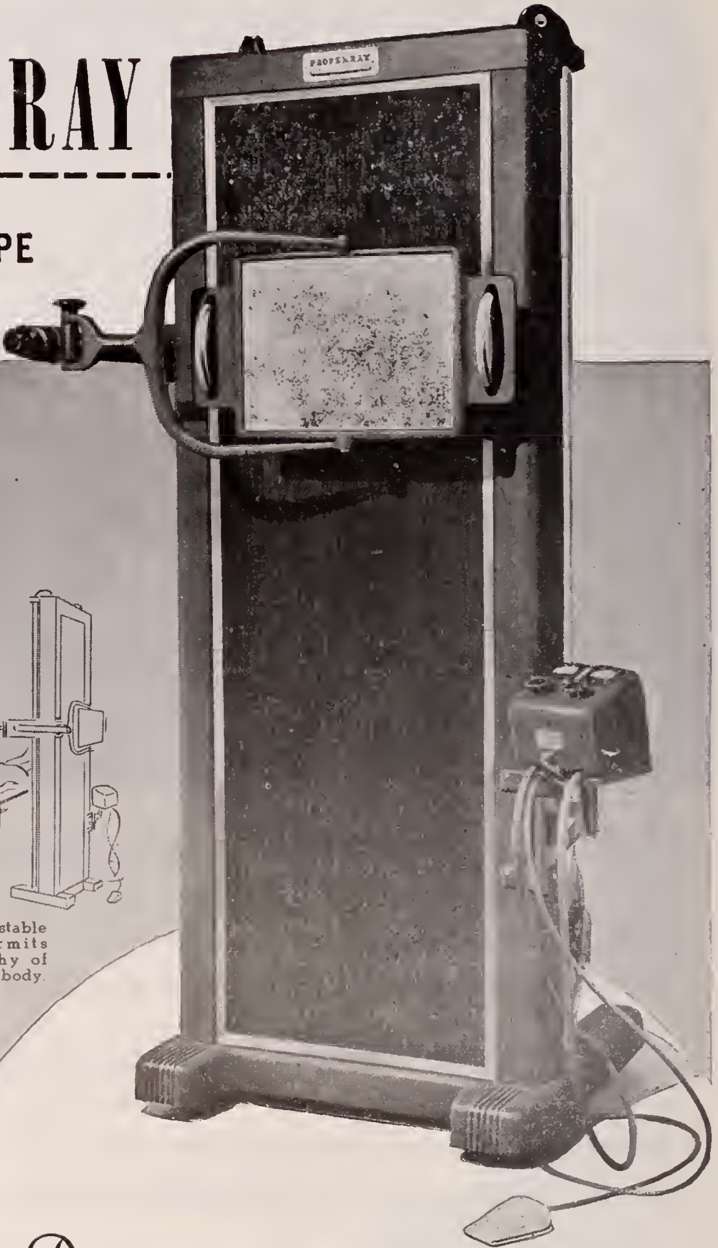

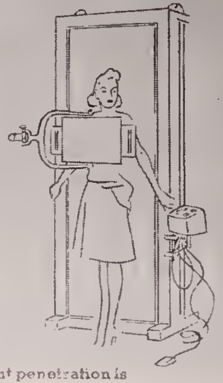

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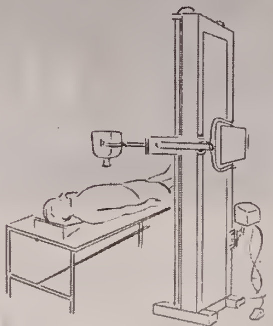

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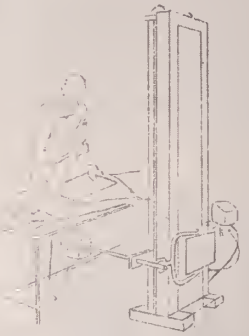

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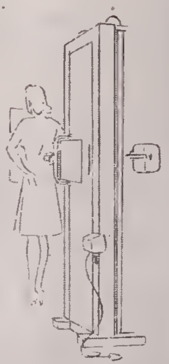

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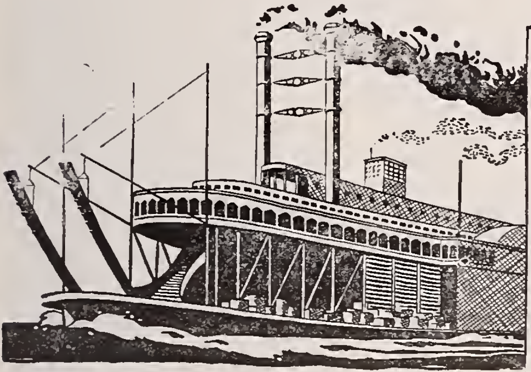

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(1) Park, E. A.: J. M. A. 115: 370-379 (Aug. 3) 1940.

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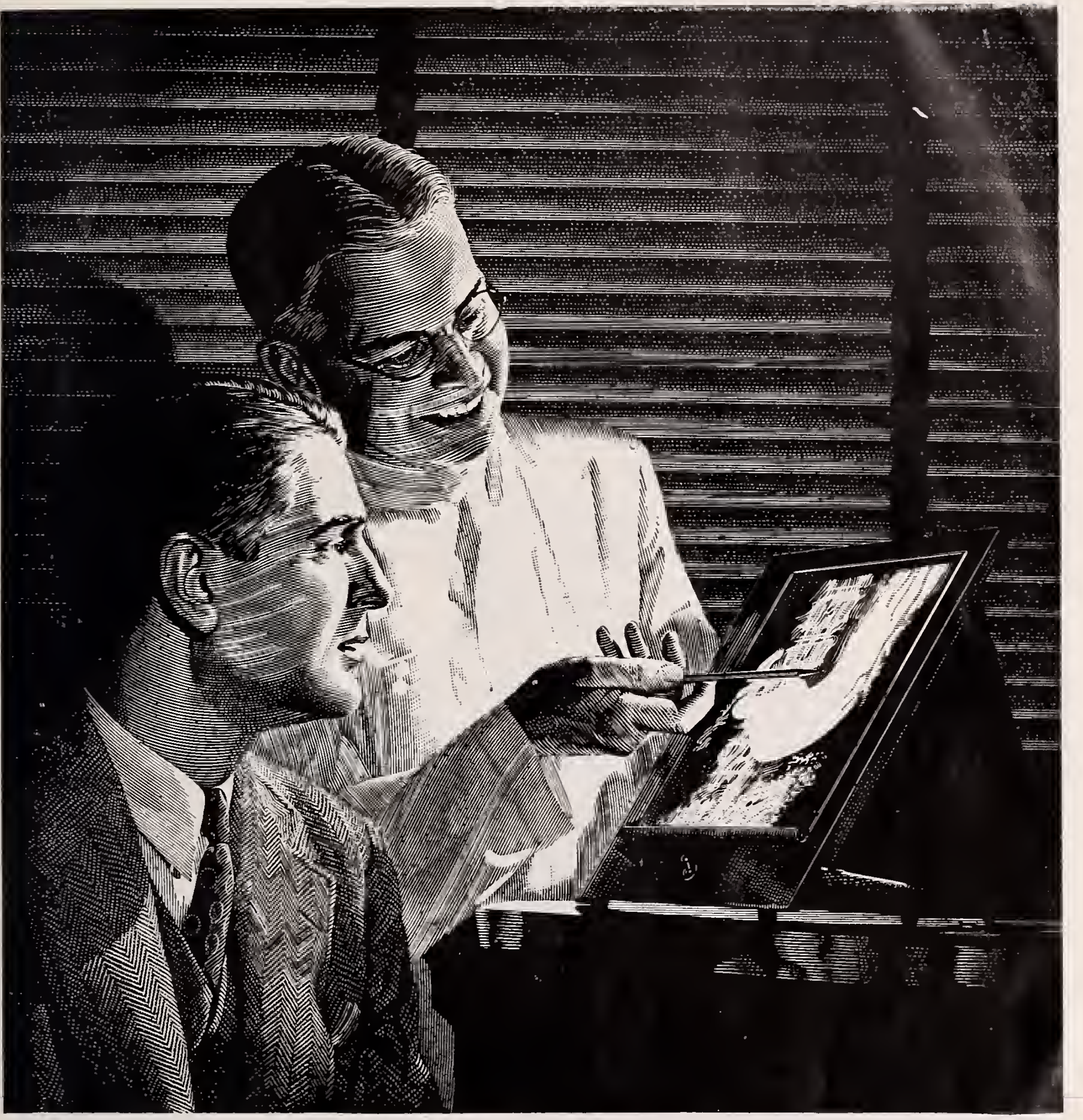

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*WOLDMAN, E. E., and POLAN, C. G.: The Value of Colloidal Aluminum Hydroxide in the Treatment of Peptic Ulcer; A Review of 407 Consecutive Cases, Am. J. M. Sc. **198**: 155-164 (Aug.) 1939.

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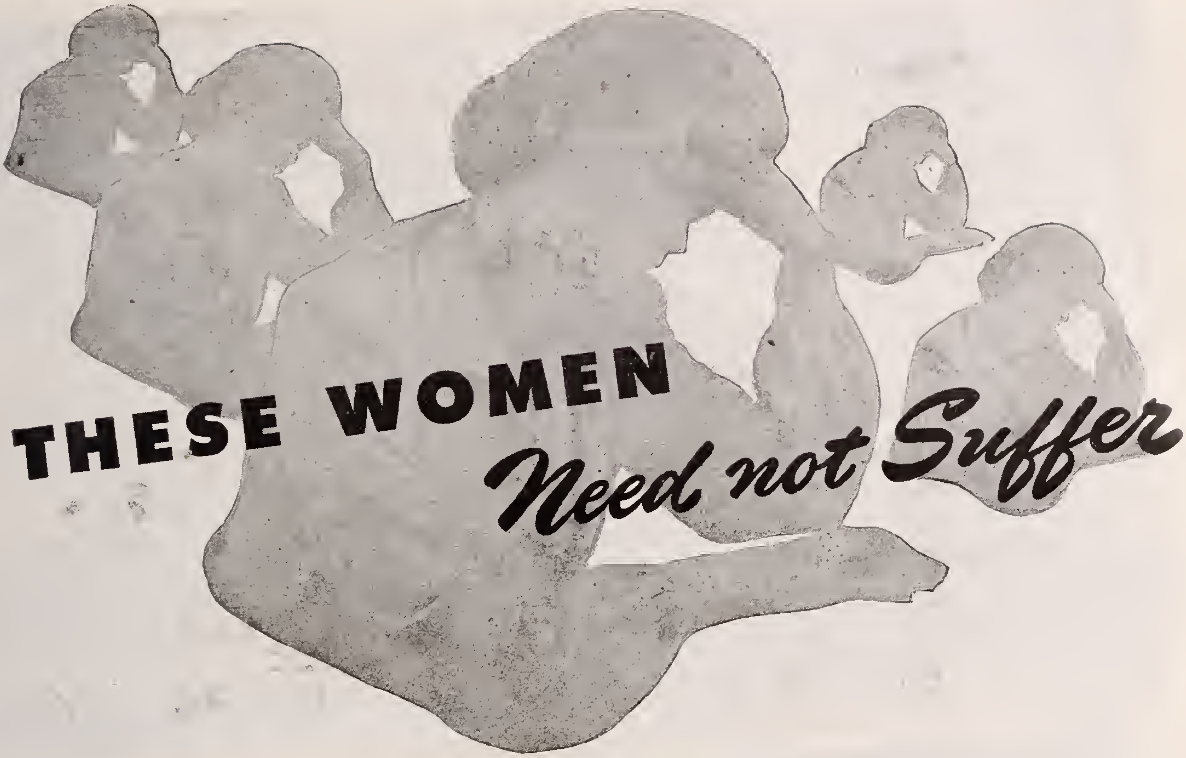

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Acute Surgical Diseases of the Abdomen*

DR. E. M. HOLDER
Memphis, Tennessee

I SHALL TAKE my text from Sir Berkeley Moynihan, who said that "There are no conditions which call upon the practitioner for skill and prompt action in the same degree, as do those acute emergencies which occur in connection with abdominal diseases." Moynihan was afterward knighted, but his books read more like fiction than real medicine. No greater member of the medical profession ever lived than he.

Since 1900 the length of life expectancy has increased 15½ years. This is not entirely due to surgery. It is due to medicine, hygiene, boards of health, the sulfa drugs, county health officers — but due anyway to the medical profession. Fifteen and a half years added to everyone's life is a wonderful thing; if that keeps on, I don't know when a man will die. So if we can increase the average length of life in 44 years 15½ years, what can we do in the future?

What can the medical profession do to lower the acute death rate in diseases of the abdomen? Let us go back twenty or thirty years. The death rate almost doubled when surgery came into common use, the first appendix operation having been done in 1896, so far as we know. The death rate was appalling and continued so until about four years ago.

The death rate in this country alone as a whole from appendicitis every year has been between 16,000 and 18,000. This is an enormous mortality. Ten years ago the death rate from these advanced cases of appendicitis averaged in Memphis in the four big hospitals 42 per cent in the complicated, late, neglected cases. Some years it ran up as high as 50 per cent, which means that one out of every two died. According to statistics compiled by Dr. Arthur R. Porter[1], of Memphis, only 4.3 per cent are dying today. How has this reduction been accomplished? Ten years ago every surgeon, universally it seems, would operate on any case of appendicitis as soon as he saw the case regardless of how long the patient had been sick, and regardless of the condition of the patient. The first thing was operation. These remarks do not pertain to early appendicitis. Early diagnosed, early seen, in early operated cases, the mortality is low; recovery about 100 per cent. The cases I am talking about are the delayed cases, the cases who have had salts, Carter's Little Liver Pills, castor oil, etc.

For a time the late A. J. Ochsner of Chicago had the largest one-man clinic in the world probably. Like one or two others, he had his own plan of treatment for these neglected cases, and it has been followed with considerable success by the active, aggressive surgeon. Likewise, there was developed in the hospitals of Memphis a plan of treatment known as the modernized Ochsner plan which saved many of these cases.

When the surgeon sees a patient five or six days after onset, with rigidity, distention, and pulse weak, he first decides whether it is an operable case. If he is going to operate as was done ten years ago, he will probably lose his patient. We put the patient in the Fowler position, give morphine for reasonable or slight narcosis, use siphon suction Wangensteen drainage tube in the stomach, a drip of saline, 1000 cc. of normal salt solution, or if his chlorides are too high, use plain distilled water, with 5 per cent glucose every 8 hours, watching the urine. Also, either into the tube or through a syringe, we put vitamins, whatever amount the patient needs and the sulfa drugs, sodium sulfathiazole, soluble in water. The patient cannot absorb readily, so we give in the muscle or in the vein whatever dosage we would by mouth. A heat tent over the abdomen makes the patient more comfortable, grateful. The patient keeps the suction syphon tube in the stomach; he gets his food in vitamins or glucose, and in a few days, the abdomen usually begins to subside, first on the left and then on the right side; finally the stomach gets flaccid, and there may even be a normal movement. Four to eight ounces of mineral oil after the third day may be injected into the colon if needed to move the bowel. No enemas. Dr. Porter reports he has seen four deaths that he believes were caused by enemas. An enema given after an appendicitis operation may cause a blow-out through the appendiceal stump.

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*Given before the quarterly meeting of the Northeast Mississippi Thirteen Counties Medical Society, June 12, Corinth, Miss.

In addition to the foregoing treatment, a blood transfusion, one every three to five days, will build up the patient, give him a defense. Keep up the saline until the emergency is over, keep up the sulfathiazole, the suction pump, the Fowler position because in the acute infection, gravity will tend to settle the infection in the pelvis, which location is more resistant. This treatment does not apply to all cases. Operative cases should be operated on at once.

All cases of children should be operated on in the first stages. Children have a very small, short omentum which is the defense structure of the human abdomen. It is not wider than two inches up to eight years of age, and, therefore, children under eight years of age have practically no defense. It is better to take a chance and operate on them even in delayed cases.

The unoperated patient should not be dismissed from the hospital until the temperature, the pulse, and the leukocyte count are all normal for ten days. He can take the operation then or go home for four to six weeks and come back for the operation. He is a good subject for recurrence, but he may never come back for the operation.

Seventy per cent of all acute abdominal emergencies are due to the involvement of the appendix. Ninety per cent of these acute abdominal cases are first seen by the general practitioner. The burden therefore rests with him. Nine out of ten cases, seen early enough, would reduce the mortality rate almost to nil.

Two new drugs are adding more as life savers than anything else — soluble B sodium sulfathiazole and penicillin. These have been responsible to great degree for the reduction of the death rate. Penicillin is harmless; there are no bad results even from a dosage from 10,000 to 30,000 Oxford units. Nausea or other disturbances are due to impurities.

There are certain cases the diagnosis of which will tax the intellect and learning and fitness of any physician. These are mystery cases. Generally speaking, one-third will be easily diagnosed, one-third not easily diagnosed, and one-third impossible to diagnose.

The following outlines give a comparative and graphic approach to the chief abdominal emergencies.

ACUTE APPENDICITIS

A. History immediately prior to the onset of pain.
B. The symptoms of the attack and local signs.
C. The order of occurrence of the symptoms.

Signs and symptoms are:

1. Pain, usually epigastric or umbilical.
2. Nausea or vomiting.
3. Local iliac tenderness.
4. Fever.
5. Leucocytosis (inconstant)
6. Local spasm or rigidity of muscles (inconstant.
7. Local distention (inconstant).
8. Superficial hyperaesthesia (inconstant)
9. Constipation (inconstant).
10. Testicular symptoms (uncommon).

ACUTE CHOLECYSTITIS

Symptoms:

1. Pain in the right upper quadrant of the abdomen.
2. Vomiting
3. Fever
4. Constipation
5. Local tenderness in right hypochondrium
6. Swelling in region of gall bladder
7. Rigidity of overlying muscles (sometimes)
8. Jaundice (rarely)

One always needs carefully to exclude:

1. Appendicitis
2. Renal pain or colic
3. Pleurisy or pleuro-pneumonia

In the Boston City Hospital of 145 cases sent in for appendectomy, 25 had pneumonia. We cannot overlook examination of the chest and respiration. If temperature is above 102° in adult look for something else. In pneumonia the pulse and temperature will always be higher than in appendicitis.

In diaphragmatic pneumonia if temperature is high I will not operate on critical stages, especially if jaundice is present. Patient will probably die A child may have a temperature of 103°.

* 11/2/44

ACUTE INTESTINAL OBSTRUCTION

1. Pain
2. Shock
3. Vomiting
4. Constipation (inability to pass feces or flatus)
5. Distention
6. Tenderness of abdomen
7. Visible peristalsis
8. Obstruction high up in the small gut leads to acute symptoms, vomiting comes on very early, is frequent and violent, initial shock and pain are greater, and distention is not an early feature.
9. In obstruction of the lower part of the small intestine, the symptoms are less severe than those just summarized. Shock and pain may be great, but vomiting is usually a little later in onset. Distention comes on after a few hours and peristalsis is often visible.
10. The large bowel obstruction pain is much less acute, shock is comparatively insignificant, vomiting is a fairly late and infrequent symptom, whilst distention from the onset of the acute attack is the rule.

The mortality rate is very high. Why is this? It is my belief that a very intense poison is generated and accumulated about the obstruction, and the intestine cannot absorb it because it is paralyzed, but when the obstruction is relieved in the bowel it absorbs quickly. Enterostomy drains only one segment. It seems the sulfanilamide group and penicillin will help us out. The shock, distress, and anxiousness of the patient is something appalling. There has been no particular advance treatment for intestinal obstruction.

RUPTURED PEPTIC ULCER

1. The stage of primary shock.

   Symptoms:

   Great and generalized abdominal pain
   Anxious countenance
   Livid or ashen appearance
   Cold extremities
   Cold sweating face
   Shallow respiration
   Subnormal temperature (95° or 96°F)
   Retching and vomiting
   Pain on top of one or both shoulders.

   The abdominal wall is rigid and tender, respiration shallow and of costal type, the pelvic peritoneum is tender, and there may be free fluid and free gas in the peritoneal cavity.
2. The stage of reaction (with masked peritonitis)
3. The stage of (advanced) frank peritonitis and secondary or toxic shock.

RUPTURE OF A SOLID OR HOLLOW VISCUS

These emergencies may happen anywhere—a fall, a kick by a horse or mule, injury by machinery, etc.

1. The solid viscera of the abdomen (liver, spleen, pancreas, kidneys) are situated high up in the abdomen largely under cover of the ribs; the hollow tubes (intestines, bladder, ureter, stomach) are more exposed to injury. Injury to solid viscera causes hemorrhage, injury to the hollow viscera usually causes peritonitis, while both types of lesion are accompanied by shock.
2. If the following symptoms are present:
   (1) When severe abdominal pain persists for more than about six hours after an injury, if the pain be accompanied by a) vomiting, especially bilious vomiting; or b) a pulse gradually rising from the normal; or c) persistent local rigidity tending to, extend; or d) deep local tenderness with shallow respiration.
   (2) When abdominal pain is absent or very slight, and anemia is not increasing, but the pulse rises steadily hour by hour, and the patient is very restless or listless.
3. If shock is still present after three hours there is nearly always some serious visceral lesion. Pain, vomiting, local or muscular rigidity, tenderness, alteration of pulse-rate, shallow respiration, free fluid in the abdomen—these are the main symptoms to note.

ACUTE PANCREATITIS

1. Acute pancreatitis accounts for less than 1 per cent of the causes of acute abdominal disease.
2. Acute pancreatitis seldom occurs before

the age of forty—more common in stout people.

3. Symptoms:
   - a. pain
   - b. Shock
   - c. Reflex vomiting or retching
   - d. Local epigastric tenderness
   - e. Epigastric tumor
   - f. Jaundice
   - g. Obstructive vomiting
   - h. Ecchymosis of one o both groins.
   - i. Glycosuria
   - Increase in urinary dia tase.

   Other symptoms:
   - k. C anosis
   - l. Dyspnoea
   - m. Loewe's test or adrenalin my driasis is sometimes positive.

4. b lateral lumbar pain, cyanosis and slig ht jaundice would be in favor of an creati is.

creati : One drop of adrenalin in one oewe's tes nutes, then a drop in the other wait five m rty minutes. If the pupil of then wait th nd other is not, you have eye is dilated a eatitis.

MES ENTERIC EMBOLUS

ute blo kage of mesenteric arter- or vei s by em olus or thrombus s rapidl to serious changes in the l.

tory of recent endocarditis might o a poss ible embolism while he- disease o previous thrombotic would so metimes suggest the of me senteric thrombosis. ere is no mechanical obstruc- intestines, in the case of vas- ion, the a ffected gut soon ralyzed; n evertheless the etimes pass es into the gut can be de monstrated by on of an en ema.

en

PREGNAN Y

gestation sa is occurrence wi th toms, yet it i s

fore the sac

In a typical c ase (which is seldom seen) the sympto ms a nd signs would be:

- a. Amenorrhea (for one or two months)
- b. Hypogastric pain
- c. Uterine bleeding
- d. Local hypogastric tenderness on pressing into pelvis tow ard one side.
- e. Small tender swe lling in lateral fornix.
- f. The passage of a me mbr ane per vaginam.

3. Symptoms and diagnosis at t he time of rupture. Rupture of the tubal gestation is probably the commonest cause of sudden death in young women.

The symptoms are usually clear:
- a. Sudden abdominal pain
- b. Vomiting
- c. Faintness or actual fain ting
- d. Sudden anaemia and collapse with small rapid pulse and subnormal temperature.
- e. A tender abdomen
- f. Free fluid in abdominal cavity
- g. Tenderness on passing fin ger against Douglas' pouch.

TORSION OF A CYSTIC OVARY

Symptoms:

Hypogastric pain, vomiting and the presence of a tender swelling in the lower abdomen are the principal features.

The vomiting comes on almost as soon as the pain, so that there is no interval between the initial pain and the vomiting as is usual in appendicitis. With an ovarian cyst there will be a definite rounded, tender swelling to be felt either by palpating the hypogastrium or by pelvic examination. If the case be not seen early, peritonitis with accompanying rigidity may prevent the full outline of the tumor being felt.

In the presence of even the slightest menstrual irregularity it would be impossible certainly to exclude an unruptured ectopic gestation. Zackery Cope in *The Early Diagnosis of the Acute Abdomen*, Oxford Medical Press, gives the following law:

1. Pain
2. Vomiting
3. Tenderness
4. Increase of pulse rate or rather change in rate
5. Increase in temperature
6. Leukocytosis

If these signs persist over six hours after an abdominal catastrophe, the waiting time is up. You had better get something done. If you don't, you get into the delayed cases.

PENETRATING AND NON-PENETRATING ABDOMINAL TRAUMAS

1. In a stab or penetrating wound of the abdomen there should be no question that the treatment is surgical.
2. Non-penetrating injuries to the abdomen —any injury to the abdominal wall, however slight, may be accompanied by serious lesions of the viscera even without any visible sign of injury of the abdominal wall.

The important signs are:
1. Pain
2. Local tenderness
3. Local muscular rigidity
4. Vomiting
5. Shallow abdominal respiration

My rule is if the pain persists for six hours or over with increasing pulse rate and the onset of shock, which should subside in a few hours, to open the abdomen and explore.

Statistics Dr. Arthur Porter, in a paper read before the Memphis and Shelby County Medical Society, April, 1944.

Medical Education in Alabama and Mississippi

SEALE HARRIS, M.D.
Birmingham, Alabama

WHY IS IT that Alabama and Mississippi are suffering more acutely because of a shortage of doctors than any other two states in the Union? In my opinion there is one basic reason why the good people of these two states have not enough physicians to provide adequate medical care for their sick; i. e., the lack of four-year medical schools to educate Alabama and Mississippi boys to practice medicine in their home states. Both states have excellent two-year schools; but the students, for whom Alabama and Mississippi have provided from two to four years of academic training and two years in medicine, have had to go to other states for their clinical instruction. It is estimated that three out of five of them do not return to their home states to practice medicine. In other words, "the penny wise and pound foolish" legislators of Alabama and Mississippi, by their failure to provide the money for four-year medical schools, have wasted the money required to give from four to six years of college training to educate doctors, most of whom practice their profession in other states. In Louisiana, Georgia and Tennessee, in which there are two four-year medical schools, the shortage of doctors is less serious.

We have had in Alabama an illustration of the value of a four-year medical school; and a sad example of the destruction of this institution with a fine record, because in 1921 the state legislature of Alabama failed to appropriate sufficient money to maintain a first-class medical school.

The Medical College of Alabama was chartered as the Medical Department of the University of Alabama in 1858, and located in Mobile. In the charter of this institution—said to have been written by Dr. Josiah Nott, one of the greatest surgeons of his time, and the man who first suggested that the mosquito transmits yellow fever and malaria, a scholarship was provided for a student from each of the sixty-seven counties in Alabama. This wise provision resulted in the proper distribution of doctors in the rural districts of Alabama, until after the Mobile school went out of existence.

I became professor of medicine in the Medical College of Alabama in 1906. At that time more than one-third of the doctors, and at least fifty per cent of the rural practitioners, of Alabama were graduates of the Mobile school. During the eight years that I taught medicine in Mobile, we graduated about fifty doctors a year—approximately 400 in the eight years. I am sure that at least 350 of the 400 doctors who graduated from 1906 to 1913, inclusive, located in Alabama. Most of them

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*Prepared by invitation of the Editor of the *Mississippi Doctor*.

returned to practice in the counties from which they had been given scholarships.

The Birmingham Medical College existed for perhaps fifteen years—from about 1897 to 1912—and probably graduated seven or eight hundred doctors. Most of the graduates of that school also located in Alabama, but largely in Birmingham and the northern part of the state. A number of the leading physicians now living in Birmingham graduated from this school.

In the year 1925 there were 2,122 doctors in Alabama, and in 1943 there were 1,864. It is probable that today in Alabama, as in Mississippi, more than fifty per cent of doctors are over sixty years of age—and many have given up practice though their names remain on the rosters of their county medical societies. There has been an increase of doctors in the cities of Alabama, but a great decrease in the rural districts. In 1916 there were 293 members of the Jefferson County (Birmingham) Medical Society, and 133 non-members, a total of 426 doctors, while in 1943 there were 411 members and 72 non-members, a total of 483. Reference to the 1916 and 1943 transactions of the Medical Association of Alabama shows the alarming decrease of doctors in the rural counties, due largely to the fact that the Medical College of Alabama went out of existence in 1922.

The decrease of doctors in a few rural counties is startling. In 1916 there were thirteen doctors in Autauga County, while in 1943 there were only seven. In Bullock County (Union Springs—where I practiced medicine for ten years) there were twenty doctors in 1916, while in 1943 there were only seven. In Cherokee County in 1916 there were eighteen doctors; in 1943, only five. In Cleburne County in 1916 there were nine doctors, and in 1943, only three. Neither time nor space will permit my collecting and publishing the statistics for the entire state of Alabama. The total number of doctors in the urban and rural districts of Mississippi are not available, but they probably are as disturbing as those presented from Alabama.

THE NEW MEDICAL COLLEGE OF ALABAMA

The reëstablishment of a four-year medical school shows that Alabama has repented her myopic and penurious policy of reducing expenses by destroying the Medical College of Alabama at Mobile, which for sixty years had been educating Alabamans to practice medicine in their native state. Be it said to the credit of Governor Chauncy Sparks, who sponsored the legislation, and the Legislature of 1944, which passed the bill, prepared by Dr. W. D. Partlow, the Medical College of Alabama has been reëstablished; with sufficient money for buildings and equipment, and for the adequate support, of a first-class four-year medical school. It required twenty years to reduce the number of doctors in the rural districts of Alabama to the point where hundreds of thousands of citizens living in the country and in the small towns cannot secure the services of physicians when they are sick. For years far-sighted physicians have foreseen the present lamentable shortage of doctors in Alabama and have pleaded with governor after governor, and with legislators for many years to find the money to support a first-class four-year medical school.

About ten years ago the Medical Association of the State of Alabama appointed a committee to secure a four-year medical school. Dr. W. D. Partlow, superintendent of the Alabama Insane Hospitals, was made chairman of that committee. He worked unceasingly year in and year out to mould public opinion in Alabama to support legislation to provide sufficient funds to support a first-class medical school. His method of approach was through the county medical societies. Local committees were appointed in each county to confer with the legislators in every county in Alabama urging them to support legislation to provide the money for a four-year medical school. Dr. Partlow's method was so effective that Governor Sparks in his inaugural address in January, 1944, announced that one of the major objectives of his administration was to be the establishment of a four-year medical school. The next month the Legislature without a dissenting vote passed Dr. Partlow's bill providing a million dollars for buildings and equipment and three hundred and sixty-six thousand dollars annually for the maintenance of a four-year medical school in Alabama.

Among the provisions of the bill was that the name of the school should be "The Medical College of Alabama," and that it should be the medical department, and an integral part, of the University of Alabama—just as the charter of the Mobile school provided in 1858. Dr. Partlow himself was a graduate of the Medical College of Alabama, saw the wisdom of providing the new school with a name that would give it individual prerogatives though it is in fact the medical department of the University of Alabama.

Dr. Partlow realized that if the president of the University of Alabama had gone to the state legislature asking for an increase of appropriation to the University providing for the creation of a four-year medical school, other state colleges would have insisted upon proportionate increases in their appropriations. He thus avoided antagonisms which might have prevented the appropriation of so large a sum to a department of the University. It was not the officials of the University of Alabama who went to the governor and the state legislature; but, it was the Medical Association of Alabama that asked for the money to establish a four-year medical school. Dr. Partlow also foresaw that in future years the Dean of the Medical College of Alabama can go to the legislatures and ask for separate appropriations and not have them included in the budget of the University of Alabama.

Dr. Partlow himself received a scholarship to the Medical College of Alabama and he realized the value of helping worthy young men to secure a medical education. He therefore included in his bill an appropriation of four hundred dollars a year to provide a scholarship in each of the sixty-seven counties in Alabama, with the understanding that the recipients will practice medicine in their home counties for at least one year. This wise provision will increase the number of doctors in the rural counties of Alabama.

Dr. Partlow's bill provided for a committee appointed by the governor to select the site for the new school. This committee after canvassing the situation thoroughly, after visiting many medical schools in a number of states, and after reviewing the propositions of various cities in Alabama, decided upon Birmingham as the site for the school.

Hillman, a 750-bed all charity institution supported by the city of Birmingham and Jefferson County, will be utilized as a teaching hospital. The magnificent new 850-bed Jefferson Hospital for private patients, owned by Jefferson County which is on the same block as the Hillman Hospital, has been placed under the management of Dr. J. W. McQueen, who has been superintendent of the Hillman Hospital for a number of years. Hillman Hospital will be staffed entirely by the faculty of the medical school, thus giving to the poor of Birmingham County the best possible medical care; and providing the school with sufficient clinical facilities.

President Raymond Paty of the University of Alabama has made a fine beginning in the selection of Dr. Roy Kracke, as dean of the new school. Dr. Kracke, Alabama born and educated through the two-year medical department of the University of Alabama at Tuscaloosa, graduated in Rush Medical College in 1927. He was professor in Emory University, Atlanta, for fifteen years. His studies on agranulocytosis gave him national recognition; and his treatise on hematology is considered the greatest book on blood that has been published. Dr. Kracke has opened an office in the Jefferson Hospital in Birmingham and is now engaged in selecting the faculty of, and preparing plans for, the new school. There can be no doubt of the success of the new Medical College of Alabama.

The physicians assembled at the April meeting of the Medical Association of Alabama in Montgomery expressed their gratitude to two public servants for work well done, when they adopted, unanimously, a resolution for a committee to raise funds to employ an artist to paint portraits of Dr. W. D. Partlow and Governor Chauncy Sparks, to be placed in the library of the new Medical College of Alabama. The funds will be collected, and the portraits presented, by the Medical Association of Alabama to the University of Alabama to commemorate the achievements of the two men who were largely responsible for the reëstablishment of a four-year medical school in Alabama.

A review of the factors responsible for the legislation creating the new four-year medical school in Alabama has been prepared for publication in the *Mississippi Doctor* hoping that it may be helpful to the Mississippi physicians, who are striving for a four-year medical school in their state. The shortage of doctors in Mississippi is even more acute than in Alabama. The only way for Mississippi to supply the needed increase in doctors, particularly in the rural districts, is to create a four-year medical school in which Mississippi born and Mississippi educated boys and girls will graduate to practice medicine in their native state.

What Drugs Do You Use?[*]

D. W. HAMRICK, M.D.
Corinth, Miss.

THE IMPLICATIONS of this subject are almost endless, but I shall limit its application to What Drugs Do You Use in Routine Office Treatments?

In most of our towns and smaller cities in this state the majority of those in our profession include both ophthalmology and otolaryngology in their practice, since we have so few cities large enough to support higher specialization.

In discussing drugs used in office treatment in both fields, I am not presuming to pose as an authority in either, for I well realize there are few specifics in medicine. One can find almost as many remedies as one finds doctors to discuss diseases. There are, however, a few drugs which are found on all our treatment tables, and certain treatment procedures which are fairly well accepted by all of us.

What constitutes the so-called office practice of the eye, ear, nose and throat specialist? I know of no other way to arrive at this than by reviewing the run of office diagnoses for a given period.

During the year, 1943, there were 3494 office histories filled out in my office, 1471 of which were refractions, and hence not specifically office treatment cases. This leaves approximately 2000 case histories of patients with conditions requiring treatment of one kind or another.

This does not include return visits, but represents separate individuals. Preoperative surgical histories were not included in this series.

Ophthalmic Conditions Seen in Routine Office Practice During 1943

refractions	1471
f. b. cornea (imbedded)	136
abrasions of cornea	63
conjunctivitis, acute	74
conjunctivitis, chronic	176
hordeolum and chalazions	83
ulcers of cornea	79
iritis, iridocyclitis and uveitis	38
glaucoma	15
trachoma	6
contusions of eyeball	11
subconjunctival hemorrhage	14
retinitis and choroiditis	12
vitamin deficiencies in children	17
pterygiums	15
marginal blepharitis	8
flash burns	15
dacrocystitis	6
optic neuritis	2
papilloedema	4
thrombosis c. v. or artery	2
chemical burns	4
fire burns	1
intra-ocular foreign bodies	2
herpes ophthalmia	3
corneal dystrophies	16
ocular t. b.	2
Total	2277

Otolaryngological Conditions Seen in Routine Office Practice During 1943.

tonsillitis	212
naso-pharyngitis	197
sinusitis (all types)	148
otitis media, acute	168
tbe. larynx	5
i. c. ear canal	102
epistaxis	10
f. b. throat	10
otitis media, chronic	42
laryngitis	10
eustachian salpingitis	53
peri-tonsillar abscess	19
otomycosis	25
furunculosis, ear	53
forunculosis, nose	12
coryza, acute	35
f. b. larynx	5
rhinitis (all types)	41
salivary calculi	6
nasal polypi	19
tumors of parotid	3
papillomata of larynx	3
herpes otitica	1
deafness (all types)	38
Total	1217
Total Eye	2277
Grand Total	3494

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[*] Read before the Section on Ear, Eye, Nose and Throat, at the annual meeting of the Mississippi State Medical Association, May 1944, Jackson, Miss.

It is not my purpose to review the literature extensively in the treatment procedures which follow, but to attempt a practical presentation of the subject, and if I know nothing more, perhaps give you a review of what we all know. Obviously all the tabulated conditions cannot be discussed, but my discussion will be confined to those in which drugs seem to play an important role in recovery.

OPHTHAMOLOGICAL CONDITIONS

REFRACTIONS

Here we are faced with the choice of a cycloplegiac:

(1) Cycloplegiac
  atropine 1%-25-30' lasts 5 to 10 days.
  scopolamine—0.1-1%-30' lasts 2 days.
  homatropine 1-2%-30' — 1 hr. lasts 1-2 days.
  homatropine & paredrin — (4%-par)—45' lasts 1-2 days.
  duboisin sulphate 1% — same as scopolamine.

ROUTINE OPTHALMOSCOPIC EXAMINATIONS

Here we are faced with choice of mydriatic:

(1) Mydriatic
  cocaine 4%-10' lasts 4 hours.
  paredrin 10-30' lasts 6 hours.
  ephedrin 10%-15-30' lasts 3-9 hours.
  euthalmin 5-10%-15-30' lasts 5-10 hours

I have quoted freely from Guyton and others in these drug actions.

FOREIGN BODIES IN CORNEA
ABRASIONS OF CORNEA

In the office one has the accepted choice of:

(1) Local anaesthetic
  pontocaine ¼-½%
  butyn 2%
  holocaine 1%
  cocaine 4%
(2) Staining agent
  flourescin
  neoprontosil
  mercurochrome
(3) Cauterizing agent
  trichloracetic acid
  phenol
  iodine

ACUTE CONJUNCTIVITIS

In the office one has the accepted choice of:

(1) silver proteins
(2) silver nitrate 1-2% to lids
(3) zinc sulphate 1-2%
(4) sulfonamide { ointments
  ophthalmic solutions
(5) collyria

CONJUNCTIVITIS, CHRONIC, PALPEBRAL AND ORBITAL

In the office one has the accepted choice of:

(1) Astringents and antiseptics
  zinc sulfate — nizin
  tannic acid
  silver nitrate
(2) Vitamins
(3) Collyria
(4) Ophthalmic ointments

HORDEOLUM AND CHALAZIONS

In the office one has the accepted choice of:

(1) Local Medications { Mercurials
  Sulfonamides
(2) Parenteral — Mangatrate

ULCERS OF CORNEA

In the office one has the accepted choice of:

(1) Staining agent
(2) Cauterizing agent
(3) Mydriatic
  Local { Pontocaine ung.
  Holocaine
(4) Analgesics
  General { Salicylates
  Codein
(5) Vitamins
(6) Chemotherapy
(7) Stimulants and Vasodilators
  Dionin
  Foreign Proteins
  Typhoid Antigen

IRITIS, IRIDOCYCLITIS, AND UVEITIS

In the office one has the accepted choice of:

(1) Mydriatics
  Atropin
  Duboisin sulfate
  Scopolamin
  Local { Holocain
  Pontocain
(2) Analgesics
  General { Salicylates
  Codein

(3) Vasodilators and Stimulants
Dionin
F. Proteins
Typhoid antigen

(4) For breaking adhesions — Ant. and Post. Synechia
Epinephrin Bitartrate
Adrenalin 1:1000
Neosynephrin 1%

(5) Adjuvants

GLAUCOMA

In the office one has first to determine whether it is acute or chronic, whether the tension is running high or low, loss of field, and the age of the patient in deciding what drugs to use:

(1) Eserin o.1-1%-10-30' lasts 12 hours
(2) Pilocarpin 1-4%-30' lasts 24 hours
(3) Mecholyl 20%-20' lasts 2 hours
(4) Doryl 0.5-2%-20' lasts 3-8 hours
(5) Prostigmin 5%-10-30' lasts 12 hours.

TRACHOMA

There are two new drugs which render almost obsolete the long array of drugs formerly used in this condition:

(1) Sulfanilimide, locally and by mouth
(2) Vitamins — Riboflavin and Vitamin C.

CONTUSIONS OF EYEBALL

In the office one has the choice of:

(1) Mydriatics or myotics
(2) Analgesics — general
(3) Adjuvants
(4) Vasodilators and Stimulants
F. Proteins
Typhoid Antigen

SUB-CONJUNCTIVAL HEMORRHAGE

One can determine capillary fragility with blood pressure cuff on forearm.

(1) Large doses vitamin C and vitamin K parenterally
(2) Snake venom parenterally

RETINITIS AND CHOROIDITIS

In the office one has the accepted choice of:

(1) Vasodilators and stimulants
(2) Adjuvants

ACTINIC OR FLASH BURNS

In the office most of the drugs formerly used have been supplanted by local analgesic and infra-red exposure 15 to 30 minutes.

DACROCYSTITIS

In the office one has the accepted choice of:

(1) Irrigations
n. saline plus adrenalin 1-2 to 10
boric acid sol. plus adrenalin 1-2 to 10

(2) Instillations
neoprontosil
1:2500 metaphen plus adrenalin 1-2 to 10
1:2000 merthiolate plus adrenalin 1-2 to 10
sulfanilamide ung.

THROMBOSIS OF CENTRAL VEIN OR ARTERY

In the office one has the accepted choice of:

(1) Vasodilators such as Nitrates — (Nitroscleran)

(2) Heparin which must be given by continuous I. V. with saline or glucose and must be given early if it offers any hope.

CHEMICAL BURNS OF EYEBALL

(1) Alkaline — Irrigations
2% acetic acid
vinegar
zinc sulfate solutions (weak)

(2) Acid — Irrigations — plain water is best.

FIRE BURNS

In the office one has the accepted choice of:

(1) Emollients { castor oil
olive oil.

KERATITIS

There is very little office treatment of this condition, the important factors being:

(1) Serological study
(2) Allergic study
(3) Deficiency study.

II OTOLARYNGOLOGICAL CONDITIONS

ACUTE TONSILLITIS

In the office one has the accepted choice of:

(1) Escharotics — Silver Nitrate
(2) Tinctures
(3) Silver proteins
(4) Washes such as
1:2500 metaphen
1:2000 merthiolate
(5) Oral Medications
bismuth compounds (sobisminol)
sulfonamides

NASOPHARYNGITIS

In the office one has the accepted choice of:

(1) Local astringents as
  silver nitrate 2-5%
  zinc sulfate 2%
(2) Local soothing antiseptics
  guiacol in oil
  co. tn. benzoin
(3) Local powders as
  sulfonamides
  boric acid and acetanilid

Fenton and Freeman report excellent results with sulfonamide powders applied locally either through the nose or behind the soft palate in this condition.

NASAL MEDICATIONS

Gill divides these into:
  vasoconstrictors
  vasodilators
  silver preparations
  oils
  antiseptics
  topical anaesthetics
  volatile inhalers
  powders
  estrogens
  intranasal vaccines
  cauterizing agents
  saline solutions
  bacterial lysates
  emulsions
  nasal jellies
  sclerosing agents.

Nasal medications must not interfere with ciliary action, must be isotonic or slightly acid according to fabricant. Most desirable pH being 5.5 to 6.5, normal saline is the best vehicle. Two new vasoconstrictors which satisfy all these desirable factors are tuamine sulfate 2%, and privine 0.1% solution. Isotonic suspensions of the sulfonamides are being tried and many of the reports are favorable—final general acceptance is yet to be awaited.

Thyrotricin and penicillin as topical nasal drugs offer great promise both in the nose and sinuses. They both are bacteriostatic in action inhibiting the growth of gram positive bacteria. Sclerosing agents such as sinusol and sodium marvhuate are becoming more widely used in hypertrophic rhinitis. Attention to allergy seems to offer one of our greatest hopes of relief in many of our nasal conditions.

OTITIS MEDIA, ACUTE (CATARRHAL AND SUPPURATIVE

In the office one has the accepted choice of:

(1) Analgesics and decongestants
  phenol and glycerin
  glycerin — wicks (Foster)
  cresatin and olive oil equal parts
  cocaine mixtures
(2) Topical anaesthetics
  pontocain 2% (warm pack for 10-15')
  cocaine-menthol-phenol
  Gray's mixture
(3) Cleansing agents — alcohol
(4) Sulfonamides

I cannot recommend too highly cresatin and olive oil equal parts as an analgesic and decongestant in acute catarrhal otitis media, and as a solvent, antiseptic and analgesic after opening an ear drum in suppurative otitis media. Pontocaine 2% warmed, and a saturated cotton swab packed against the ear drum for 10 to 15 minutes is the most effective topical anaesthetic I have yet found.

OTITIS MEDIA, CHRONIC

In the office one has the accepted choice of:

(1) Cleansing agents — alcohol
(2) Bacteriocidal and bacteriostatic powders.
  a. Sulzberger's boric acid and iodine 0.75-2%
  b. Sulfonamide powders
(3) Penicillin and thyrotricin
(4) Urea solutions
(5) Roentgen therapy to eustachian tubes 5mg. to side.

LARYNGITIS, ACUTE

Drugs used locally in the office either by swabs or sprays are of little value. Both the therapy and routine of the patient in this condition is carried out either at home or in the hospital.

LARYNGITIS, CHRONIC

The use of drugs locally for this condition are of little value except perhaps in the removal of crusts or secretions.

LARYNGITIS, TUBERCULOSIS

Locally applied drugs per se, are of little value in this except perhaps:

(1) Analgesic sprays or lozenges—Pontocain is perhaps the best.

(2) Alcohol injections of superior laryngeal nerve for unbearable pain.

Pneumothorax, galvanotherapy, phototherapy, and roentgen therapy being the accepted routines.

OTOMYCOSIS

Due to aspergillus niger, flavus and fumigatus.

Recent literature narrows agents used in this down to about two drugs.

(1) Thymol
(2) Cresatin

Thymol may be used as a ½% solution in 70% alcohol, or it may be combined in ½% with cresatin and olive oil equal parts. Cresatin is believed by Gill, Stokes and Dart to be our best fungicide.

FURUNCULOSIS, EAR

In the office one has the accepted choice of:

(1) Packs such as
  liquor Al-acetate
  cresatin
(2) Parenteral Medications
  mangatrate
(3) Chemotherapy

FURUNCULOSIS, NOSE

In the office one has the accepted choice of:

(1) Parenteral Medications
  a. Mang. Butrate (Mangatrate)
(2) Chemotherapy
(3) X-ray and Infra-red.

CORYZA, ACUTE

In the office one is virtually limited to:

(1) Vasodilators

SECONDARY HEMORRHAGE FROM NOSE OR THROAT

In the office one has the choice of commonly used:

(1) Local Hemostatics
  Agno$_3$
  Trichloracetic Acid
  Chromic Acid
  Cobra venom
(2) Parenteral and I. V. Medications
  Snake venom (Moccasin 1:3000)
  Koagamin (Koxylate)
  Rabbit Serum Globulin (Hemostatic Globulin)

To summarize, it would seem the essential drugs in ophthalmology one should have in the office are:

In the Cycloplegiac Room

atropine 1%
scopolamine 1%
homatropine 2-4%
paredrin
cocaine 4%
ephedrin 10%
euthalmin 5-10%
eserin 1%
pilocarpin 1%

Eye Treatment Table

pontocaine ¼%
cocaine 4%
fluorescin
trichloracetic acid
phenol
iodin
neosynephrin 1%
argyrol 20%
agno$_3$, ½-2%
znso$_4$ ¼-2%
atropine 1%
epinephrin bitartrate
adrenalin 1:1000
castor oil

Parenteral Medications

mangatrate
typhoid antigen
snake venom
f. protein
riboflavin
nitroscleran

Washes

normal saline
boric acid solution
2% acetic acid solution
1:2500 metaphen

Likewise, it would seem the essential drugs in otolaryngology one should have in the office are:

Treatment Table (Ear, Nose and Throat)

silver nitrate 10-25%
zinc sulfate 2%
adrenalin 1:1000
cocaine 10%
glycerin
guiacol 1% in olive oil and C & M
phenol 5% in glycerin
silver nitrate 50%-100%
silver nitrate 5%
alcohol 50-60%
taumine sulphate 2%
pontocaine 2%
co. tincture benzoin
cresatin
trichloracetic acid
cocaine — menthol — phenol or Gray's mixture.

Parenteral Medications

mangatrate
koagamin
thiamin chloride
snake venom
f. proteins

Sprays and Powders

1-2% cocaine

sulzberger's iodine pdw .75-2%
Dobell's
sulfathiazole suspension in paredrin
sulfathiazole suspension in glucofedrin
sulfanilamide pdw.
sulfathiazole pdw.
isotonic vasoconstrictor
nebulizer oil

It may be that 33⅓% of all human ills are imaginary, that another 33⅓% are part physical and part imaginary, and that only 33⅓% are purely physical. Nevertheless, it has always been a trait of humankind to seek treatment; and it is a common observation that the physician who treats patients continues to have patients. He who does not, drives his patients to quacks and charlatans. Local and general rest are perhaps our greatest therapeutic agents both in ophthalmology and otolaryngology, but I find that few patients are willing to pay for that advice alone.

DISCUSSION

Dr. G. W. Bounds, (Meridian)—As Dr. Hamrick has covered the subject so thoroughly and well I do not have very much to add except a few observations in regard to certain drugs that I find work for me. Every doctor knows by trial and error what gives him the best results in certain conditions and while interested in new ideas and treatments, more or less sticks to his old reliables.

I disagree with the use of pontocaine anesthesia routinely because of the sensitivity found among both my patients and myself. My fingers have become irritated repeatedly from its use.

I use atropine for iritis cases and have found few substitutes that even approximately take its place.

For local infections of the ear I use a combination of phenol and glycerin with satisfactory results, while for fungus conditions I use 2% ammoniated mercury ointment.

I find a 1% solution of neosynephrin is best for shrinkage of the nose and usually all that is necessary. For follicular tonsillitis 10% silver nitrate solution is a usual procedure.

Group Practice

A. B. HARVEY, M.D.
Tylertown, Mississippi

UP TO THE time of Pasteur and Lister a single individual could master all that was known of medicine and was capable of doing full justice to the needs of his patients. Shortly after the Civil War, the advances made in medicine and the allied sciences were so great that one was no longer able to keep well posted on the progress of medical knowledge. Consequently, some physicians began to devote their time and energy to the study of diseases in a limited medical field. Then the patterns of medical practice became more numerous and diverse. Doctors in increasing numbers began to band together as partners or in groups.

No one knows who formed the first medical group, but a few have existed for more than a half century. All are familiar with the larger group clinics. During the past thirty years, this form of practice has increased greatly. Today, in the United States, there are over four hundred groups which, as a rule, do the best work of their respective communities.

A group may be an association of general practitioners or specialists, or of both. It may include only three or four men; or its members may represent every major specialty. It need not be cumbersome, but should be efficient and practical. The human qualities of kindness, sympathy, and deep understanding, along with energy, a sense of humor, a pleasing personality, are just as important in handling patients in a group as in individual practice. Organization does not interfere with close and continued relations between doctor and patient.

The first and foremost consideration of such an organization should be, service to the patient. Any group built about this conception should give satisfactory results. The doctor's benefits are important and will naturally follow system and good service.

The advantages to the patient are, cheaper service for a more complete examination and treatment, a saving of time, energy and mental strain, more cures and fewer deaths. The advantages to the physician are many. They can enjoy better health, more rest, and more capacity for work. They have the satisfaction of knowing that they are able to offer a more adequate and higher quality of medical service to their patients and their communities than if they were practicing as individuals. They get self-improvement more rapidly from close contact with the other members. They have a better opportunity of attending medical meetings, conferences, post graduate study, and vacations. A physician in a group is less likely to undergo stagnation or get into a rut of complacency which is the probable sequence of professional isolation and the adoration of a circumscribed clientele. There is greater permanency of one's life work, for when one who works as an individual passes on, his work dies with him. If he has accomplished something as a member of a group, his work is carried on by the organization. Shared responsibility is another great advantage. It certainly contributes to the doctor's peace of mind. Coöperative effort affords the doctor the opportunity to work closely with his confrères and to compare opinions.

Emancipation from the financial details of his practice is bound to appeal to any physician who has wished that he could spend most of his time actually practicing his profession.

The surgeon gets the benefit of the medical man's opinion, the pediatrician gets the benefit of the skin specialist's opinion, and so on. Since the exchange of ideas takes place within the unit, none of the practicing physicians has to worry about the effect of such consultations on his own economy. As a general rule, the group is organized around a leader who either himself or through a committee decides the general policy of the unit. Coöperation replaces competition between the doctors in the unit, but competitive stimulus between the groups is in no way affected. There is a certain stimulus from working together. Mediocre medicine is less likely to appear, even in the hands of the careless or the lazy, if an associate is looking on and checking the results. Frequent consultations will improve the minds of any group of workers.

While it is true that the quality of medical work done by a clinic group will obviously depend upon the ideals, qualifications, and ability of the medical staff, a group of well trained physicians actuated by the aims and ideals of better medical service to the community, is in a better position to render superior medical service and such a group should have a successful future. These advantages are true of most groups. While some units do not reach a high standard, still its standard is higher than these same individuals practicing separately and independently.

It would seem that the adoption of organized or group practice by the medical profession would naturally follow. Both the public and the medical profession recognizes the need of some change. That the physician understands this need is shown by the numerous hospitals which have been built during the past thirty years and the many groups attempted or actually established.

Why have not more doctors formed groups, if such practice is so desirable? In most communities this is not the traditional method of practice. Physicians, like all humans, are slow to upset tradition. In many instances, doctors who have wanted to form units have not had enough resourses to get a common office and hospital and equip them. In other cases there is not enough income to run the risk of changing from one type to another.

Doctors organized into groups work in close interrelationship. Each sees what the other does and how he does it. Since the team's reputation is determined by the reputation of its individual members, each physician in the unit must of necessity do all he can to keep his confrères at the highest professional level. It is harder for an individual to fall behind professionally when he is a member of a unit than when he is in practice for himself.

The establishment of group practice is to be regarded as in the best interest of the public. But does it yield the greatest effectiveness per unit of the doctor's time and energy? I believe it does. I can see no better way to compensate for doctors withdrawn from civilian practice than by increasing the effectiveness of the physicians remaining, by urging them to form such medical groups. Doctors in a group can care for more patients than the same physicians working separately.

Any system of health service and medical care which waits for disease to develop before going into action is outmoded. We cannot lick today's and tomorrow's problems with yesterday's weapons. Well administered groups of physicians operating in place of isolated practitioners would be a most effective means to this end.

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DO WE LOOK TO THE FUTURE?

The American Medical Association has warned against taking so many of our boys out of the medical schools, apprehensive of what the results may be. The Council has brought these facts to the attention of our Congress showing our doctor shortage. In the *Times Herald*, Washington, D. C., Frank G. Waldrop points out the astuteness of the Russians in having 120,000 men enrolled in their medical schools in 1941 while they were carrying the big burden for the Allies. The United States is now robbing the cradle of medical science and other sciences. He comments as follows:

"No doubt about it, the Russians are looking ahead and showing some smart policies.

"The same cannot be said about our own good U. S. A. Early this year, Selective Service announced no more premedical students would be granted draft deferment.

"All across the board in science and medicine, the squeeze has been put on until now the future of science generally is being abandoned to girls and 4-F's.

"Our queer draft policy is slashing down the volume of oncoming doctors in drastic fashion. So serious is the situation that the house of delegates of the American Medical Association has appealed to the President to correct it.

"Their request makes sense, as far as it goes. But it ought to be broadened so that not only our supply of doctors but also of engineers and scientists, generally can be maintained.

"After this war the U. S. A. will have less fat to live on than ever before. We have thrown away our natural resources with reckless abandon, and where we will get more is unknown. Hereafter we will have to live more by our wits and less by luck. Science will hold the key to our safety, more than ever. And today we are wasting our future in science as recklessly as we are burning up our oil, exploding our steel and giving away our dollars. And Russia is smartly building hers."

§

Some say Mississippi does not have a city big enough for a four-year medical school. We have a state of two million people and we can have a medical school so planned that every inch of its clinical material may be available for utilization.

A medical school in our state that does not plan to extend its services to every nook and corner of our state from Yellow Rabbit to Vinegar Bend should not be established in the first place. To every door in Mississippi to which Uncle Sam carries a letter, the best in medicine shall be provided. This is good human economy.

§

The foundation of Mississippi's medical education, its doctor distribution, and its medical service to the people, rests in its 88 hospitals well dispersed over the state.

The cause of poliomyelitis is still an undiscovered field. The carrier of the germ or virus seems to be at home in the country or the city, but cold weather cramps its style.

§

The recordings of the observations of the country practitioner would add greatly to our clinical material.

§

Public health well administered in proper bounds is a great preventive measure against socialized medicine in its malignant form.

W. H. A.

PREMEDICAL AND MEDICAL STUDENTS

President Roosevelt on July 3 expressed his unwillingness to order a revision of Selective Service policy under which deferments are no longer granted to premedical students. In answer to a letter from Congressman A. L. Miller of Nebraska asking for such a revision, the President replied that he had given the matter careful thought and was convinced that the need of the armed forces for young, vigorous men was of paramount importance.

He pointed out that no premedical students could be available for practice before 1948 in any event, that many veterans will desire to study medicine upon discharge from the armed forces, thereby increasing the potential supply of physicians and also that a considerable number of registrants with IV-F classifications are now taking premedical courses.

President Roosevelt's statement was the signal for a great deal of editorial comment.

Opinion was by no means unanimous and varied in shades—from the American Medical Association's prediction that a cumulative shortage of 2,000 physicians will ensue unless the policy is altered, to the observation of the Jackson *Citizens Patriot* (Mich.) that "premedical" training given thousands of young men who are serving on the battlefield is far more valuable than that which might be obtained in classrooms.

It is the opinion of the editor that the same old story is unfolding itself again of an individual or a group of people screaming "Wolf" in anticipation of a "Wolf" which might never come. Since the decision has been made and probably will not be changed, then it behooves us to plan accordingly. I can visualize with **free education** provided by the "G. I. Bill of Rights" that we may expect the usual number of applicants for medical education. We may as well face the facts — for the time being no premedical training except for those not physically fit for service in the armed forces, women and veterans, while those who were and are now studying medicine will continue to be deferred by selective service until they quit school, or graduate.

To be entitled to the educational benefits of Public Law 346, an act to provide Federal Government aid for the readjustment in civilian life of returning World War II veterans, cited as the "Servicemen's Readjustment Act of 1944 (G. I. Bill of Rights) the following conditions must be met:

(1) That the person served in the active military or naval service on or after September 16, 1940, and prior to the termination of the present war.

(2) That the person has been discharged or released from the active military or naval service under conditions other than dishonorable.

(3) That the person's education or training was impeded, delayed, interrupted, or interfered with by reason of his entrance into the service. Any person who was not over 26 years of age at the time he entered the service shall be deemed to have had his education or training impeded, delayed, interrupted, or interfered with. This refers to entrance into active service after September 15, 1940. A person over 25 years of age at the time he entered the service must submit satisfactory proof to show that his education or training was impeded, delayed, interrupted, or interfered with.

(4) That the person shall have served ninety days or more, exclusive of any period he was assigned for a course of education or training under the Army specialized training program or the Navy college training course and was pursued to completion, or the time he was assigned as a cadet or midshipman at one of the service academies, or, if less than ninety days, that he shall have been discharged or released from active service by

> reason of an actual service-incurred injury or disability. The ninety days —or less—service need not all be within the period September 16, 1940 to the end of the war, but may include service extending into or beyond such period.

Any person over 25 years of age who has met the requirements of (1), (2), and (4) above, but cannot submit satisfactory evidence that his education or training was impeded, delayed, interrupted, or interfered with is entitled to a refresher or retraining course not to exceed a period of one year.

Any person who meets all the requirements of (1), (2), (3), and (4) above is entitled to receive education or training or a

L. W. L.

Just as small or local wars indicate local unrest or dissatisfaction with existing conditions, just so do world wars indicate world-wide dissatisfaction with governmental systems and adjustments. Even before World War I, I was convinced that the entire world faced a crisis — that new social, economic and governmental adjustments were imminent and unavoidable. We think of all change as evolutional, gradual. Even so, great changes are initiated by **revolution** as well as **evolution.** We say and think that we are fighting that the old order may be preserved. But I am convinced that the old order has passed, never to return. We must prepare ourselves to make some kind of adjustment to a new order.

The economic system of the entire world has always been capitalistic. This system has been eminently satisfactory to an ever-lessening minority, but the overwhelming majority of mankind have never been satisfied, because their interests have always suffered. We are told in holy writ that the love of money (not money per se) is the root of all evil. People love money because it is the source of power. When great sums of money are acquired by a few individuals, they love it because of the power it gives them. Hence, many (most) of the evils that beset the world stem from this vast accumulation of wealth and power in the hands of a few. Under the present economic system this evil can never be obviated; for if all the wealth of the world should be equally divided and prorated, in course of brief time it would all be in the hands of a few again. Money has no intrinsic value, yet under the capitalistic system it is assumed to have. Labor is the only commodity that has intrinsic value. When our federal head Adam forfeited his right to receive free sustenance, he was emphatically told that thenceforth, man should live by the sweat of his face, not the sweat of another. He was told not that he might buy food with money, but that he should labor for it. But under man's scheme those who have the most money do, and have done, little or no labor. I once heard William Jennings Bryan say that those who earned the most money were so busy earning it that they did not collect it and that those who collected the most money were so busy collecting it that they did not earn it. The divine edict was that all men should work. And it can be assumed that no man's labor should be valued above the legitimate expense of his upkeep. Under that edict and assumption every man should work and every man is entitled to all necessities and comforts of life. If labor and nothing but labor can produce wealth, it is evident that when a few men have all the wealth and the masses have none, that the masses have produced it and the few have acquired it. This is neither fair nor honest. I do not wish to be considered as an able economist, for I am not. Still I have some opinions that I feel I have the right to express. One of these opinions is that our taxing system is wrong. I do not oppose the sales tax. A properly adjusted and enforced income tax is just. An inheritance tax that will prevent the accumulation of enormous wealth in a small number of families is just. I do not think any form of advalorem tax is just, for it penalizes a man for putting money into circulation I have submitted these opinions to every incoming Mississippi administration for a long time. Every governor to whom I have submitted them has said, "Your plan is good but inexpedient." So long as expediency is permitted to abolish right and honesty, we may expect discontent and rebellion. These are the underlying causes of war.

No one has feared and repudiated state medicine more than I, but I think I can see a world-wide trend toward socialism. Perhaps this will benefit the millions who are not getting a fair show. Perhaps we may not be able to stem this trend. So perhaps we, the medical profession, had best be planning to guide and control this unrushing tide. However I confess that I do not see how we can hope to do it. Perhaps we may be able to work out some adjustment that will keep crooked politicians from controlling and manipulating it. But if every man is compelled to work and given just recompense for his labor, then the old system of administering medical service would be recognized as the best in every way.

G. S. B.

News and Comment

PEPPER SUBCOMMITTEE ON WARTIME HEALTH AND EDUCATION

In June, 1943, the Senate passed a resolution (S. Res. 74) authorizing the Senate Committee on Education and Labor or a subcommittee thereof to investigate the deficiencies in health and education among persons otherwise fit for service with the armed forces and persons otherwise fit to be employed to the best advantage in agriculture, industry, and other activities so as consistently with the spirit of our institutions, and the national emergency, best to promote the war and victory. Pursuant to this resolution, a subcommittee of the Senate Committee on Education and Labor was created to conduct the contemplated investigations, composed of Senator Claude Pepper of Florida, as chairman, Senator Elbert D. Thomas, Utah, Senator James M. Tunnell, Delaware, Senator Robert M. LaFollette, Jr., Wisconsin, and Senator Kenneth S. Wherry, Nebraska.

Dr. Victor Johnson, secretary of the Council on Medical Education and Hospitals, was requested to appear before the subcommittee by Senator Pepper and reviewed the available utilization but emphasized the fact that the problem most immediately vital to the nation's health is the production of doctors by our medical schools. Said Dr. Johnson:

> "If current policies of the armed forces and the government continue, there may result an acute shortage of physicians and inadequate medical care after the war. There will be too few doctors to care for civilians, the standing army and navy, and the veterans, whether or not new hospitals are constructed. Doctors need hospitals to work most effectively. But hospitals without competent doctors—which is what we shall have, even without new hospital construction—are worthless."

In commenting on the testimony given by Selective Service officials, the *Detroit Free Press*, in its issue of July 12, said that the testimony was startling, that it should bring forth an immediate and nationwide response but cautioned against hasty conclusions. It said:

> "All that we do know is that insurance statistics show that in the past half century the span of American life has been extended 10 years, which would indicate a steadily growing improvement in our national health. In the days of Shakespeare a man was considered old and finished if he arrived at the age of 50. Today a man of 50 considers himself in his prime and is more worried about his golf score than he is about his arteries.
>
> "Military examiners are of necessity perfectionists. Millions of men too frail for the rigors of battle can live to healthy old age, long past the span of life of their more athletic fellow mortals.
>
> "Nevertheless the challenge has been made. It is agreed, whether our health has improved in recent generations or not, that the physical state of our people is not good. There is room for vast improvement.
>
> "As group medicine develops, along with the furtherance of the science of public health, there will be established — voluntarily — annual medical inspections. From such sources we may gather sound statistics on which to base our judgments.
>
> "In all this progressive effort the medical associations should take the lead. If they do not accept their social responsibilities, the people will eventually insist that the government move in."

NO ANNUAL REGISTRATION FEE FOR MISSISSIPPI DOCTORS

The State Board of Health has had several inquiries from Mississippi physicians who had read an article in the *Commercial Appeal* some time ago referring to the annual payment of fees by physicians based upon a 1941 act of the legislature.

Dr. D. L. Owens, referred to in the article, is secretary of the State Board of Medical Examiners of Arkansas and no doubt the article in question was sent in to the *Commercial Appeal* from one of their reporters in the state of Arkansas.

Mississippi does not have an annual registration fee for physicians. The Board of Health will continue to issue a Roster of Mississippi Physicians at intervals and render other services to the physicians of this state without charge as it has done heretofore.

DR. ZERFOSS ELECTED

Dr. Kate Savage Zerfoss, Nashville, was elected president-elect of the American Medical Women's Association at their annual meeting in Chicago in June. Dr. Zerfoss is a member of the Council of the Southern Medical Association, representing the state of Tennessee, and she is a past-chairman of the Medical Women of the Southern Medical Association.

THE PHYSICIAN'S IMPORTANCE IN WAR AND PEACE

To memorialize the medical profession's "skill and courage and devotion beyond the call of duty" is the purpose of the new prize-contest recently announced by the American Physicians Art Association.

For full details, write to the Association's Secretary, Dr. F. H. Redewill, Flood Bldg., San Francisco, Calif. Also pass this information on to your physician-artist friends, both civilian and military.

ANNOUNCEMENT

The Schmid Sanitarium, Jackson, Mississippi, wishes to announce the reopening on or about September 6 of the former Welch Sanitarium. The Sanitarium will be operated as an ethical neuro-psychiatric clinic and hospital. The medical director will be O. A. Schmid, M.D., formerly member of the staff, Missouri State Hospital; senior physician, Kankakee, Illinois State Hospital; psychiatrist, Wallace Sanitarium, Memphis, Tennessee; instructor of nervous and mental diseases, University of Tennessee; lately chief of staff and assistant superintendent, Mississippi State Hospital, Whitfield, Miss. Mrs. O. A. Schmid, R.N., will be superintendent. She was formerly superintendent of nursing, Missouri State Hospital; lately, director Maternal and Child Health Clinic, Jackson, Mississippi.

The Sanitarium is located on the Wiggins Road, west of Foster General Hospital.

POSTGRADUATE REVIEW COURSES

The Tulane University of Louisiana, School of Medicine, Department of Graduate Medicine, New Orleans, Louisiana, will again offer short postgraduate review courses during the coming session. The dates for these will be:

Internal Medicine, November 6-11, 1944.
Pediatrics, December 11-15, 1944.
Obstetrics and Gynecology, January 15-19, 1945.

A number of scholarships for general practitioners have been arranged through the Mississippi State Board of Health covering tuition ($25), transportation, and a daily stipend of $6.00 to cover room and meals.

Applications for scholarships should be made to Dr. Felix J. Underwood, Mississippi State Board of Health, Jackson 113, Mississippi, as early as possible.

IN THE SERVICE

From New Guinea, Dr. Buford Word sends greeting, his message carrying a slight touch of nostalgia:

"It has been over a year now since I left Camp Shelby, part of which time was spent in Illinois, and the remainder here in the Southwest Pacific. Naturally, I am not familiar with what transpired at the June meeting there, and hope by this time you have already received the information you were seeking.

"I spent many pleasant months at Camp Shelby; however, most of my friends have been scattered around the globe. Colonel Stout and Colonel Reed are the only two remaining I hear from occasionally."

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Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—**James G. Thompson, Jackson.**

Ear, Nose and **Throat—Edley Jones, Vicksburg.**

Obstetrics and Gynecology—**J. F. Lucas,** Greenwood.

Orthopedics—Thomas H. Blake, Jackson.

Pathology and Clinical Pathology—John C. Henthorne, Vicksburg.

Pediatrics—Harvey F. Garrison, Jackson.

Public Health—Felix J. Underwood, Jackson.

Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

Discussion and comments are invited.

DERMATOLOGY

Edited by Dr. Herbert Rattner

Archives of Dermatology and Syphilogy, Vol. 49, No. 6; P. 441, 442 and 443. June 1944

KELOIDS: A Review of the Literature and a Report of Eighty Cases. John Garb and M. J. Stone, Am. J. Surg. 58:315 (Dec.) 1942.

Most keloids are caused by known traumas. Syphilis and tuberculosis were not found to be etiologic factors. The exact cause is unknown, but the hormonal factor is considered important.

Treatment with roentgen rays or radium before or soon after excision of a keloid does not prevent its recurrence. Various methods, such as the injection of fibrolysin, cryotherapy (refrigeration), electrolysis and use of ultraviolet rays or grenz rays, were valueless. Among the surgical methods used but proved ineffective by the authors are scarification with the scalpel, capillary drainage by means of through and through keloidal sutures, and subepidermal excision for the purpose of causing primary union.

Roentgen rays and radium are the only effective agents for the treatment of keloids and will cure all the smaller ones except those that are radio-resistant. For large keloids and those that are radio-resistant, excision in the healthy tissue with the scalpel or the electrosurgical knife is preferred. The healing is promoted by aseptic technic and the use of a stimulating substance, such as ointment of scarlet red N. F. Roentgen therapy should be applied at the first sign of recurrence, but not until then, as irradiation of the involved region before and soon after excision will not prevent the formation of a keloid.

H. Miller, Philadelphia. (Arch. Otolaryng)

* * * * *

SENSITIVITY TO TOPICAL APPLICATION OF SULFATHIAZOLE OINTMENT. Roy A. Darke, J. A. M. A. 124:403 (Feb. 12) 1944.

Darke calls attention to the degree of sensitivity to sulfathiazole ointment existing among the general population. Two hundred and eighteen patients were treated topically with 5 per cent sulfathiazole ointment. Sensitivity to it was found in 12 of them (5.5 per cent). Two patients had an exacerbation of the sensitization reaction following the oral administration of 1 gm. of sulfathiazole.

Because this sensitivity may preclude the use of the drug in the therapy of such diseases as meningitis, pneumonia and gonorrhea, sulfonamide preparations should be used topically only when a specific need for them can be justified.

* * * * *

INFLAMMATORY DISORDERS OF THE SKIN OF THE FEET. John F. Madden. J. A. M. A. 124: 743 (March 18) 1944.

There is a tendency among both laity and physicians to call all diseases of the skin of the feet fungus infections. Fewer diagnostic errors would be made if fungus infections were diagnosed as a last resort.

Contact dermatitis usually appears on the dorsa or the sides of the feet and is rarely seen on the soles. The nails and the interdigital webs are seldom involved. The usual causes of contact dermatitis are shoe dye, sock or stocking dye, leather and shoe polish.

Paronychia is usually due to pyogenic infection, fungus infection, psoriasis or syphilis. Paronychia caused by pyogenic organisms is generally secondary to ingrown toenails.

Psoriasis may be confined to the soles or the nails for many years or a lifetime. The soles are dry and scaly and are often fissured. The eruption is more diffuse than the occupational keratoses and usually starts in childhood or later life, in contradistinction to the congenital keratoses.

Dyshidrosis is an acute or subacute inflammatory condition occurring on the hands and the feet. The lesions occur on the soles and the interdigital webs. The eruption appears as deep-seated solitary vesicles which itch intensely. The eruption frequently follows periods of overwork, nervous exhaustion or emotional disturbance and is often accompanied by hyperhidrosis.

Lichen simplex chronicus occurs on the dorsa of the feet. The soles are frequently the sites of lesions and scabies in babies and small children. At the Ancker Hospital, benzyl benzoate has proved less satisfactory than the compound ointment of sulfur in the treatment of scabies.

Lichen planus may be seen about the ankles, the soles and the dorsa of the feet.

* * * * *

URTICARIA FOLLOWING A DENTAL SILVER FILLING. H. Markow, New York State J. Med. 43:1648, 1943.

The author reports the case of a 41-year-old nurse in whom urticaria developed immediately after an amalgam had been used in filling a tooth. The patient demonstrated a positive reaction to contact with mercury and exacerbation of symptoms on removal of fillings and on spillovers of the amalgam into the mouth. She showed complete relief after removal of all fillings containing mercury.

PEDIATRICS

REDUCING THE HAZARDS DURING THE FIRST WEEK OF LIFE—*Prentice, John W. *Wisconsin Medical Journal*, 43: 316 (March 1944.)

"The prevention of disease in the infant should begin with the prenatal care of the mother. Correction of conditions that impair the health of the mother should go far in the prevention of various things that happen to the newborn infant. The manner in which labor is directed and conducted is highly important; this applies as well to the use of various drugs that are given to prevent pain during labor." Procedures to make labor painless and reduced in time very definitely increase the risk to the infant and should be used only if in so doing the best interests of mother and baby are not jeopardized. "This paper deals only with those conditions most frequently encountered, namely, respiratory difficulties, cerebral hemmorrhage, hemorrhagic disease of the newborn and jaundice."

"The pathogenesis of asphyxia neonatorum is that of anoxia and is closely related to the changes occurring in the intra-uterine environment. Control of asphyxia neonatorum centers upon the period before birth. . .Intra-uterine anoxia produces a congestion, edema, hemorrhage and tissue degeneration. The clinical symptoms that are observed are the results of these changes induced by the anoxemia; the severity of the symptoms depends upon the degree and duration of the anoxia and upon the susceptibility of the individual tissues. The anoxia may be confined to the intra-uterine period, and recovery may set in at birth, providing the lungs are capable of supplying adequate oxygen to the tissues. Frequently the function of the lungs is so interfered with by the fetal anoxia that they are unable to sustain a positive oxygen balance. Under these conditions, the clinical state becomes progressively worse unless relief can be afforded. A relatively slight fetal asphyxia may produce dangerous extra-uterine anoxemia if the fetal process seriously involves the lungs or respiratory center. Any complication of pregnancy or labor which may endanger the oxygen supply of the fetus should be corrected. If this is not possible, the immediate duty of the physician is to anticipate fetal asphyxia and be prepared to diagnose and treat it.

"In the past, all too frequently at the signs of fetal asphyxia the treatment consisted of a hurried delivery by forceps or extraction. Such procedures only add insult to the already depressed centers. How much more sensible and sane it is to relieve the distressed fetus by giving oxygen to the mother. No elaborate equipment is necessary to do this. All that is needed is a tank of oxygen, rubber tubing and a mask; a reducing valve is very helpful if available. Of course, if the fetal heart does not improve, immediate delivery is advisable if possible; but if the heart does improve, labor may be allowed to continue normally.

"Immediately upon delivery the respiratory passages should be quickly, but gently cleared of any obstructing material such as mucus, amniotic fluid. Following this, if the infant does not breathe spontaneously artificial resuscitation in some form is necessary. Here again, care and gentleness must be used. Oxygen or air must be introduced into the lungs, caution being used to avoid too much pressure. The infant should be kept at complete rest with a constant supply of oxygen; an atmosphere of 50 per cent to 60 per cent should be maintained. The general condition quickly improves if the infant is to survive."

Frequently one finds cerebral manifestations associated with, or resultant to asphyxia in the newborn. "A careful and thorough examination is essential to determine the cause if possible and proper treatment of the cerebral condition should be instituted. The infant has come into a new environment and must make many adjustments. He should be kept warm, handled gently and given rest . . . The baby should not go to breast and should be handled as little as possible, body temperature being carefully maintained. Here again, oxygen is a valuable aid to the general management.

"Sedation through the use of chloral hydrate or a barbiturate may be advisable. Nature in withholding breast milk for three or four days may be intentionally causing a dehydration program for cerebral edema. Vitamin K should be given to all mothers at the onset of labor and repeated at twelve-hour intervals until labor has been completed. This can be supplemented by oral or subcutaneous administration of the vitamin to the baby during the first few days of life. . .The primary treatment should be directed at prevention; this means intelligent conduct of labor, no needless interference, but proper assistance when prolonged labor would be harmful to the mother or baby."

There has been considerable difference of opinion regarding the necessary criteria for the diagnosis of hemorrhagic disease of the newborn. The following recommendation has been generally accepted. "If in addition to local hemorrhage of traumatic origin (in the central nervous system, liver, adrenals) the infant develops spontaneous internal or external hemorrhage in areas not directly related to the injuries, the case should be classified as hemorrhagic disease of the newborn. The hemorrhage begins within the first three days of life. The common source of bleeding is from the alimentary tract, but it may occur from the brain, liver, kidney or any organ or tissue, internal or external. Red blood cell counts or, in the absence of marked jaundice, estimations of hemoglobin at frequent intervals are of great value in determining whether hemorrhage is continuing or has ceased and in judging the effect of treatment. A sudden fall of hemoglobin percentage may occur in a very short space of time and should be checked at frequent intervals. Too much reliance should not be placed on the bleeding time, as this may be within normal limits. Furthermore, it should be remembered that the bleeding time may be prolonged in normal infants and in conditions other than hemorrhagic disease of the newborn. The determination of prothrombin content of the blood is extremely helpful."

"The key to successful treatment is the prevention of the hypoprothrombinemia in the infant, and this is accomplished by the proper use of vitamin K. Here again, it is advisable that all mothers be given K intramuscularly at the onset of labor and repeated at twelve-hour intervals until delivery has been completed. If any evidence of hemorrhage in the infant is noted or suspected, vitamin K should be given to the infant intramuscularly at once and continued by this route or orally throughout the first week of life. If much blood has been lost or the hemoglobin is materially lowered, transfusion is also necessary. The use of vitamin K has very definitely decreased the necessity for a second transfusion."

"Jaundice is brought about by the production of a greater amount of pigment than the liver is capable of handling or delivering through the ducts of the duodenum. Too great a destruction of red blood cells, liver insufficiency or biliary obstruction will produce jaundice. The condition may be produced by the presence of all three factors.

"Jaundice in the presence of clay-colored stools, an essentially normal blood picture and a negative Wassermann is pathognomonic of congenital obstruction."

"The condition known as physiologic jaundice is quite generally accepted by the profession. This is the mild degree of jaundice occurring not earlier than the third day and not later than the fifth day in many babies." This opinion should not be wholly accepted. The frequency with which it occurs is not sufficient to verify the term physiologic. It is much more frequently seen in the premature and the weak infant; therefore some liver insufficiency most probably is present. Slight cerebral trauma is apt to result in hemorrhage in the brain in these cases.

"Hemolytic jaundice occurring at birth,

before the second day of life, and jaundice which increases in intensity rapidly or tends to fade and be replaced by paleness are more serious. . .The term erythroblastosis foetalis has been used to designate this group because of the presence in the blood stream of varying amounts of erythroblasts or nucleated red blood cells. The mild form in which destruction of the blood is slow and the degree of jaundice is slight has been called anemia of the newborn. The rapid destruction of the blood cells before or shortly after birth frees a tremendous amount of biliary pigment to the liver, resulting in the clinical manifestations just described. The liver, because of the overload, or because of a congenital or acquired insufficiency, is unable to handle the excess amount of pigment." The Rh factor is thought to be present in a good many of these cases. "Metabolism of the carbohydrate, fat and prothrombin in the liver is impaired.

"It is necessary that this condition be constantly kept in mind and recognized in the delivery room or soon after birth if the severe cases are to be cured. Every newborn infant that is icteric or edematous or becomes so during the first two days of life should have a red blood count, a white count and a differential. Hemoglobin estimations are usually not accurate, or require more blood than can be obtained easily from the finger or the heel. The reporting of a white blood count of from 30,000 to 40,000 is usually a mistake. The count not only represents the white cells, but also nucleated red blood cells. On the recognition of this depends the diagnosis of the more severe and rapidly developing cases.

"True obstructive jaundice is usually fatal. Occasionally the hepatic and cystic ducts are patent, and anastomosis of the gallbladder to the stomach or the duodenum may be lifesaving when done by competent hands. In the more severe cases of anemia of the newborn—red blood count below 2,500,000 and hemoglobin below 30 per cent — transfusion should be given. In icterus gravis and erythroblastosis foetalis transfusions are imperative and should be repeated until satisfactory results have been obtained. When cases of this type have occurred in a family and another baby is expected, it is the duty of the physican to make preparations that transfusion may be available immediately after the baby is born if found necessary. Liver extract in the crude form should be given intramuscularly and glucose subcutaneously. Vitamin K should be given intramuscularly or orally during the first three or four days of infant life."

COMMENT

This is perhaps one of the most timely articles that we have had the pleasure of abstracting for some time. It is full of good common every day means of practice. If there is no doubt that it will be a great service to many a man who has the responsibility of caring for both the prospective, as well as the mother and the baby.

HFG.

> It has been argued that if tuberculosis were made uniformly compensable, it would soon be wiped out; but it is obviously unfair to ask industry and the insurance carrier to take upon their shoulders the accrued liabilities of tuberculosis in industry. When industry and the worker realize the terrible cost in manpower and human suffering entailed and that a method of control is feasible, then case finding in industry will be more eagerly accepted and may in fact, be one of the outstanding contributions toward public health that will survive this war.
>
> —Irving R. Tabershaw, M.D., Industrial Medicine, March, 1943.

State Board of Health

Felix J. Underwood, M. D.

MAINTAINING HEALTH IN WARTIME*

H. A. Kroeze, Director

Public Health Engineering

During the past year there has been a lessening of the vast amount of emergency sanitation work resulting from the war effort. With the ending of the main military camp construction period and the occupancy of the camps by military personnel, many policies relating to sanitation in areas surrounding these establishments have been worked out with military authorities. Coöperative programs have been developed and at the present time relations between military and civilian health authorities have stabilized to the extent that quite satisfactory relations regarding control of environmental sanitation in these areas now exist. There has developed a cooperative spirit of mutual helpfulness in most areas, which has greatly aided both civilian and military authorities to understand the authority, responsibility, and limitations of each, so that the combined efforts of both have been productive of much improvement and good will.

Problems relating to water supply and sewage disposal in communities which have experienced population increases as a result of the war effort still exist in some areas. The division has spent considerable time assisting these communities in determining their needs and presenting their case before the Federal Works Agency which has funds, provided under the Lanham Act, for rendering financial assistance to such communities. Much of such work has already been completed and put into operation. Efforts are now being made to secure approval of projects for additional sewerage facilities at Pascagoula and Gulfport, a sewerage system for Gloster and Woodville, additional water facilities for Winona and Jackson, and sewerage facilities at Winona and Petal.

The milk situation which was so acute a year ago fortunately has improved somewhat. This has been due to further improvements secured in dairy pasteurization plants, sanitation and to a slightly decreased demand for milk by military establishments. The demand has decreased slightly because of a somewhat smaller population at a number of the camps. The situation at Pascagoula has shown no improvement, however, so far as adequacy of supply is concerned, although there has been much improvement shown in the sanitation status of the local milk supply. Spring grass has increased production considerably and thus far it has not been necessary to issue any permits for the production of reconstituted milk on the basis of the emergency regulations adopted by the Board in January of this year.

Improvements in rural sanitation have been retarded considerably because of the scarcity of materials. Lumber is now the most critical construction material and steel and screen wire are still critical. Consequently, such work as the construction of sanitary privies, septic tanks, the improvement of rural water supplies, and screening of homes has slowed materially. Plans are being made, however, to inaugurate an extensive program of such work throughout the state as rapidly as the material situation improves. A great deal of time is now being devoted to proper maintenance of existing rural school sanitary facilities since material requirements for such work are not great and maintenance is essential to preserve the value of such facilities.

The program of malaria control in war areas carried on cooperatively with the United States Public Health Service is being continued around all war establishments in the state. This program is financed entirely by Federal funds but is under the supervision of the State Board of Health. It is intended to eliminate the possibility of the spread of malaria to troops from areas beyond the military reservations. This work is now being extended to the prisoner-of-war labor camps which are being established in several parts of the state. Thus far ten sites for such camps, eight of which are in the Delta, have been selected and two camps are already in operation. While malaria control around these areas is designed to protect the prisoners against malaria infection, it is felt this work will be of value to the surrounding population. The Army policy will be not to assign any prisoners known to be infected with malaria parasites to these labor camps. It is felt, however, unknown carriers may be included in the groups assigned to such camps. Without control of the malaria transmitting mosquito there is a possibility of these camps serving as a foci of infection to the surrounding areas.

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*(Report submitted to the State Board of Health at its semi-annual meeting, May 31, 1944.)

Because of the prevalence of salt marsh and other pest mosquitoes in the vicinity of the Merchant Marine Basic Training School at Henderson Point, the United States Health Service has recently assigned an entomologist to the State Board of Health to make a study of this situation. The pest mosquitoes in this vicinity have become so numerous as to seriously interfere with the training activities at this Base. **Anopheles quadrimaculatus** control has been in effect under the Malaria Control in War Areas program, and therefore malaria does not appear to be a hazard around this establishment.

The division has begun a program of promotional work with municipal officials for the purpose of stimulating interests in post-war water supply and sewerage improvements. Because of the difficulty in securing materials for such work during the past three years, many needs have not been taken care of in existing systems and practically no new work or extension of systems has been undertaken except in war areas. The division plans to foster such work for immediate inauguration at the end of the war and to that end is assisting communities in the development of plans along sound sanitary engineering lines.

Cases of typhus fever showed a very significant rise in Harrison County and in Gulfport in particular during last summer. The situation became so alarming that the health authorities recommended a rat control program for the city, this program to consist of vent-stopping all commercial buildings and poisoning and trapping rats throughout the city. The city officials agreed to coöperate financially and this work was started in November 1943. Since this was a new type of activity, the United States Public Health Service was asked to lend trained personnel to assist in the program. At the present time the vent-stoppage work is about seventy-five per cent completed. The rat population in the city has been materially reduced and practically eliminated in the protected buildings. Arrangements have been made for this work to be self-sustaining to insure rat control work in the city. This program is being used for training our own personnel in typhus control work of a permanent type and it is hoped the division will be able during the coming year to render assistance of this type to other communities in the state. In addition to this program, the division has cooperated with the United States Wild Life Survey in conducting city-wide rat eradication programs in 16 cities and towns in the state during the past six months. This work, while of a temporary nature, will greatly reduce the rat population of a community, for at least a year. Combined with the eradication work has been a general cleanup in these communities to eliminate as many feeding and harboring places for rats as possible.

* * * * *

POLIOMYELITIS

Dr. A. L. Gray, Director of the Division of Preventable Disease Control, cautions that poliomyelitis has hit a few areas of the country and the incidence has reached epidemic proportions. Mississippi, fortunately, had shown little increase up to July 20, averaging only about a case a week, or a total of 36 cases since January 1, 1944. It is important, however, for physicians as well as public health workers to be on the alert and for the time being it is requested that all cases and suspected cases be reported to the Division of Preventable Disease Control immediatley by Clinical Report Card, wire, or telephone.

If the disease should reach the epidemic stage in the state, it will be necessary for emergency hospitalization and isolation facilities to be set up. Only by full reports being made as rapidly as cases are diagnosed can the Division anticipate the need for emergency hospitalization and isolation facilities and make plans accordingly.

When it is desired to send cases to the Polio Clinic in Jackson, telephone in advance (3-4222 or 2-2902) in order to confirm available space. The following instructions issued for the public are repeated for the information of physicians and others:

Procedure to Follow for Obtaining

Admission to the Polio Clinic in Jackson, Miss.

1. Notify the Polio Clinic in Jackson (day or night). Phone 3-4222. (This should be done by the county health officer or atattending physician.)
2. Arrange proper transportation. This should be by ambulance or private car. **Never public conveyance.**

   (Note: There is a chapter of the National Foundation for Infantile Paralysis in every county. These chapters are prepared to assist victims of polio and will defray expenses of transportation if funds are needed for this purpose. If unable to locate the chapter chairman, do not delay sending the patient. Arrangements can be made by calling the state officer of the National Foundation at Jackson. Phone 2-2902.)
3. SEND AT THE EARLIEST POSSIBLE MOMENT AFTER CONFIRMING AVAILABILITY OF BED SPACE AT THE CLINIC.

   Do not wait until paralysis develops. When not sure of the diagnosis, send patient on regardless. Diagnosis can be determined at the Polio Clinic.
4. The Polio Clinic is available to all ages, white or colored, whether they are able to pay or not.
5. Never bring or send a sick child to the regular field clinics. This is important.
6. Physicians should immediately report all cases, and suspected cases to the county health officer.

* * * * *

CLINICAL LABORATORY SERVICE

The clinical laboratory service inaugurated by the State Board of Health early in 1942 to provide advisory service to technicians in hospitals throughout Mississippi has made steady progress. Miss Ester Thomas, registered technician with the American Society of Clinical Pathologists, has done a commendable job in stimulating improvement in laboratory technic among the various hospitals requesting this assistance. During the past year a total of 49 visits were made to laboratories of clinics and hospitals, and ten technicians were awarded scholarships of four weeks each. While the technician was away on a refresher course in laboratory technic, competent assistance was furnished by Miss Alida Bos, who served as relief technician.

In April, 1944, a change was made in the instruction provided the various technicians who manifest sufficient interest and ability to profit by a refresher course. Formerly, they had been sent to Tulane University School of Medicine for a four-week course in laboratory technic. Arrangements have now been completed to provide this training in the laboratories at Vicksburg by Dr. R. H. Fenstermacher and Dr. J. C. Henthorne, competent pathologists. The laboratory under the direction of Dr. Fenstermacher will alternate each month with the one directed by Dr. Henthorne in giving the refresher course. It is believed that this new arrangement will be most beneficial because these two pathologists understand the needs of the technicians in the state and are anxious to see an improvement in the clinical laboratory work now being done.

* * * * *

PENICILLIN IN THE TREATMENT OF VENEREAL DISEASE

The use of penicillin in the treatment of early syphilis and sulfa-resistant gonorrhea at rapid treatment centers in Meridian, McLain and Greenwood marks an important step forward in the task of handling a great public health problem in Mississippi. These centers, operated by the State Board of Health in cooperation with the United States Public Health Service, have greatly facilitated venereal disease control work in Mississippi and other states.

Use of penicillin in the treatment of venereal diseases in being undertaken on a large scale by the United States Public Health Service and a number of state boards of health. Under this program, hundreds of patients will be treated at rapid treatment centers within a year.

Although evidence is already sufficient to indicate that penicillin does have value in the treatment of syphilis of all types, the use of penicillin in this program will be restricted at first to patients with early, untreated syphilis and those for whom six months' or a year's follow-up seems possible.

Application for admission to a public health treatment center is made through the office of each county health department, and such treatment is immediately available to all individuals certified by a private physician and the county health officer.

NEW BOOKS IN LIBRARY

Ackerman, Lloyd, *Health and Hygiene*, Lancaster, Jaques Cattell Press, 1943.
Allen, R. M., *The Microscope*, New York, D. Van Nostrand, 1940.
American Psychiatric Association, *One Hundred Years of American Psychiatry*, New York, Columbia University Press, 1944.
Anderson, C. M., *Emotional Hygiene; The Art of Understanding*, 3rd ed., Philadelphia, J. B. Lippincott Company, 1943.
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Castallo, M. A., & Walz, A., *Expectantly Yours* New York, Macmillian Company, 1943.
Cushing, Harvey, *A Bio-Bibliography* of *Andreas Versalius*, New York, Schuman's, 1943.
Davis, J. E., *Principles and Practice of Rehabilitation*, New York, A. S. Barnes & Company, 1943.
Grinker, R. R., *Neurology*, 3rd ed., Springfield, Charles C. Thomas, 1943.
Herms, W. B., & Gray, H. F., *Mosquito Control*, red. ed., New York, Commonwealth Fund, 1944.
Jensen, Frode, *Medical Care of the Discharged Hospital Patient*, New York, Commonweath Fund, 1944.
Levinson, Abraham, *Pioneers of Pediatrics*, New York, Froben Press, 1943.
Monsch, Helen, *Feeding Babies and Their Families*, New York, John Wiley & Sons, 1943.
New York Academy of Medicine, *The March of Medicine*, 1943, New York, Columbia University Press, 1943.
Novak, Emil, *Textbook of Gynecology*, 2nd ed.; Baltimore Williams & Wilkins, 1944.
Pillsbury, Mary E., *Nursing Care of Communicable Diseases*, 6th ed., Philadelphia, J. B. Lippincott, 1942.
Sigerist, H. E., *Civilization and Disease*, Ithaca, Cornell University Press, 1943.
Southmayd, H. J., & Smith, Geddes, *Small Community Hospitals*, New York, Commonwealth, 1944.
Strain, F. B., *Your Child, His Family and Friends*, New York, D. Appleton-Century Company, 1943.
Taylor, K. W., *Do Adolescents Need Parents*, New York; D. Appleton-Century Company, 1937.
White, Paul D., *Heart Disease*, 3rd ed., New York, Macmillan Company, 1944.

Books may be borrowed by physicans on request.

PREVALENCE OF COMMUNICABLE DISEASES IN MISSISSIPPI

	June 1944	*June 1943*	*June 5 yr. av.*
Acute Poliomyelitis	10	1	6.6
Bacillary dysentery	2363	3083	2708.2
Dengue	9	0	3.0
Diptheria	15	12	13.0
Influenza	935	985	884.2
Measles	668	545	776.6
Meningococcus meningitis	14	19	8.4
Other forms meningitis	0	1	1.2
Pellagra	267	340	382.8
Pneumonia	484	501	338.6
Pulmonary tuberculosis	215	128	142.2
Scarlet fever	19	12	15.2
Smallpox	4	0	1.6
Tularemia	18	12	8.4
Typhoid fever	12	15	21.0
Typhus fever	24	16	10.2
Undulant fever	4	13	4.4
Whooping cough	1485	1634	1254.0

Tuberculosis is unique among communicable diseases in the fact that its transmission from one person to another depends in large measure upon the dosage of bacilli and repeated opportunities for infection rather than upon a single exposure. Intelligent patients with occasionally positive sputum need not be a serious menace to members of their families or their associates if they have been properly educated.

—Esta H. McNutt, Am. Rev. of Tuberc.,

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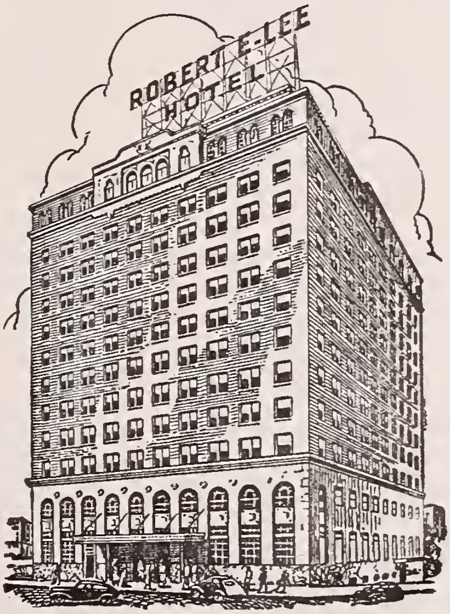

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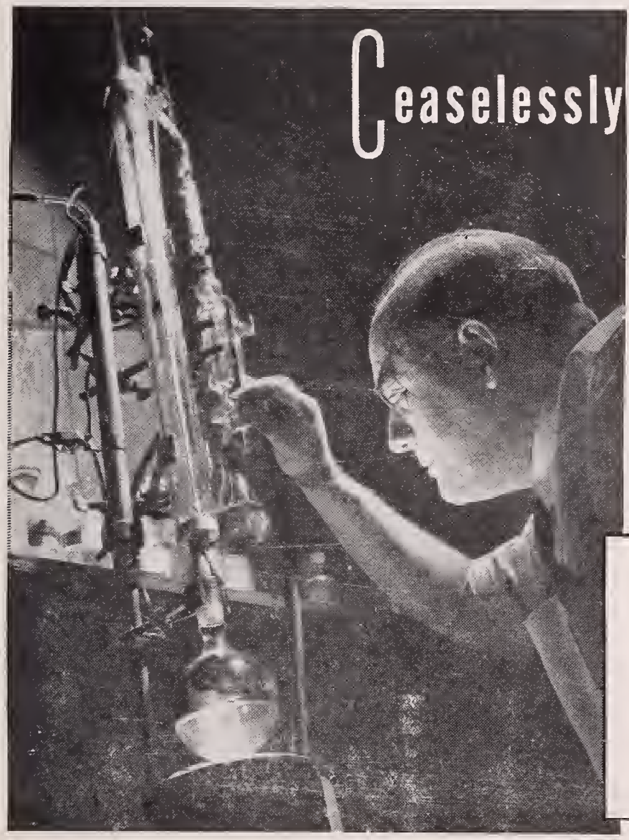

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UNDERWOOD ISSUE

The Mississippi Doctor

VOL. 22 BOONEVILLE, MISSISSIPPI, SEPTEMBER, 1944 NO. 4

Felix J. Underwood, M.D.
Executive Officer, Mississippi State Board of Health
President, American Public Health Association
Annual Session, October 3, 1944
New York, N. Y.

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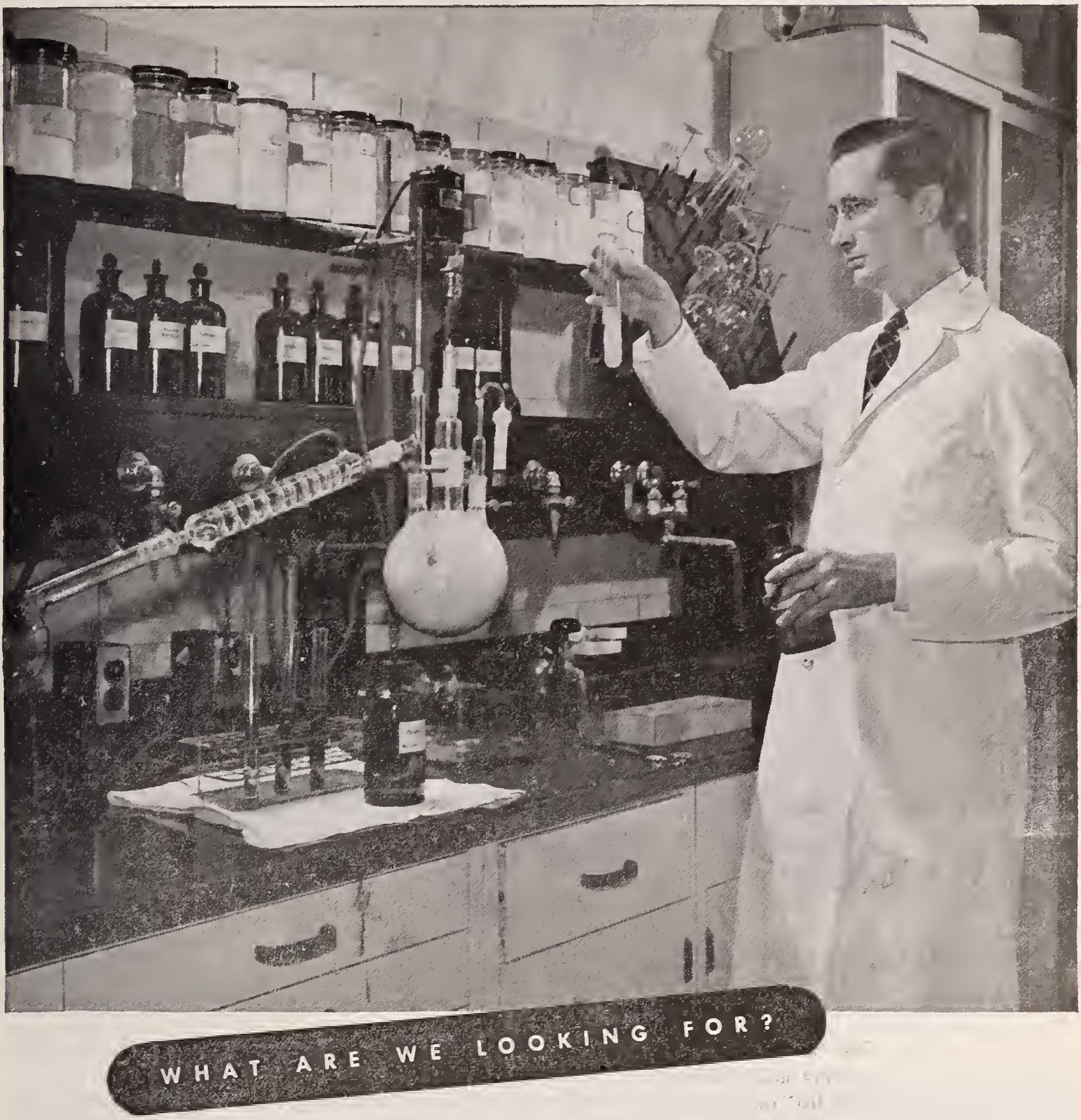

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1. Ending February 24, 1942. 2. November 24-December 20, 1941. American Institute of Public Opinion.

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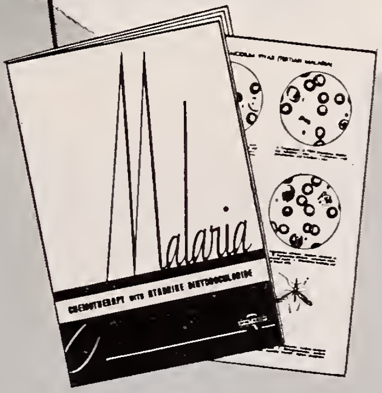

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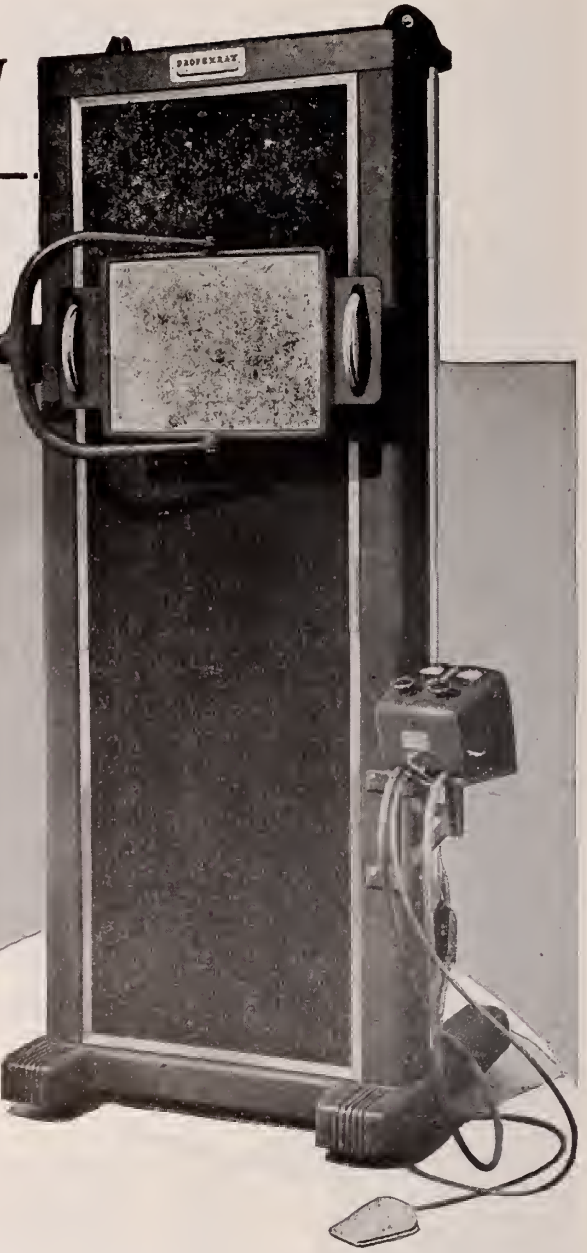

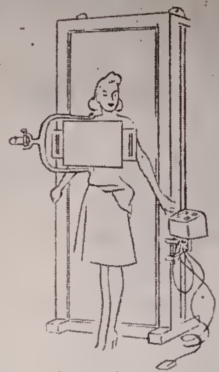

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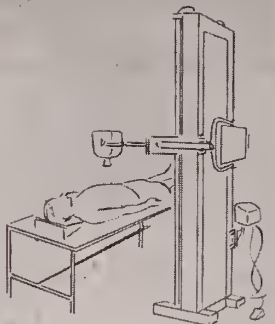

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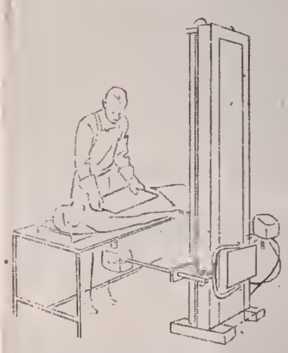

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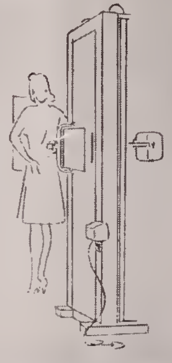

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The Mississippi Doctor

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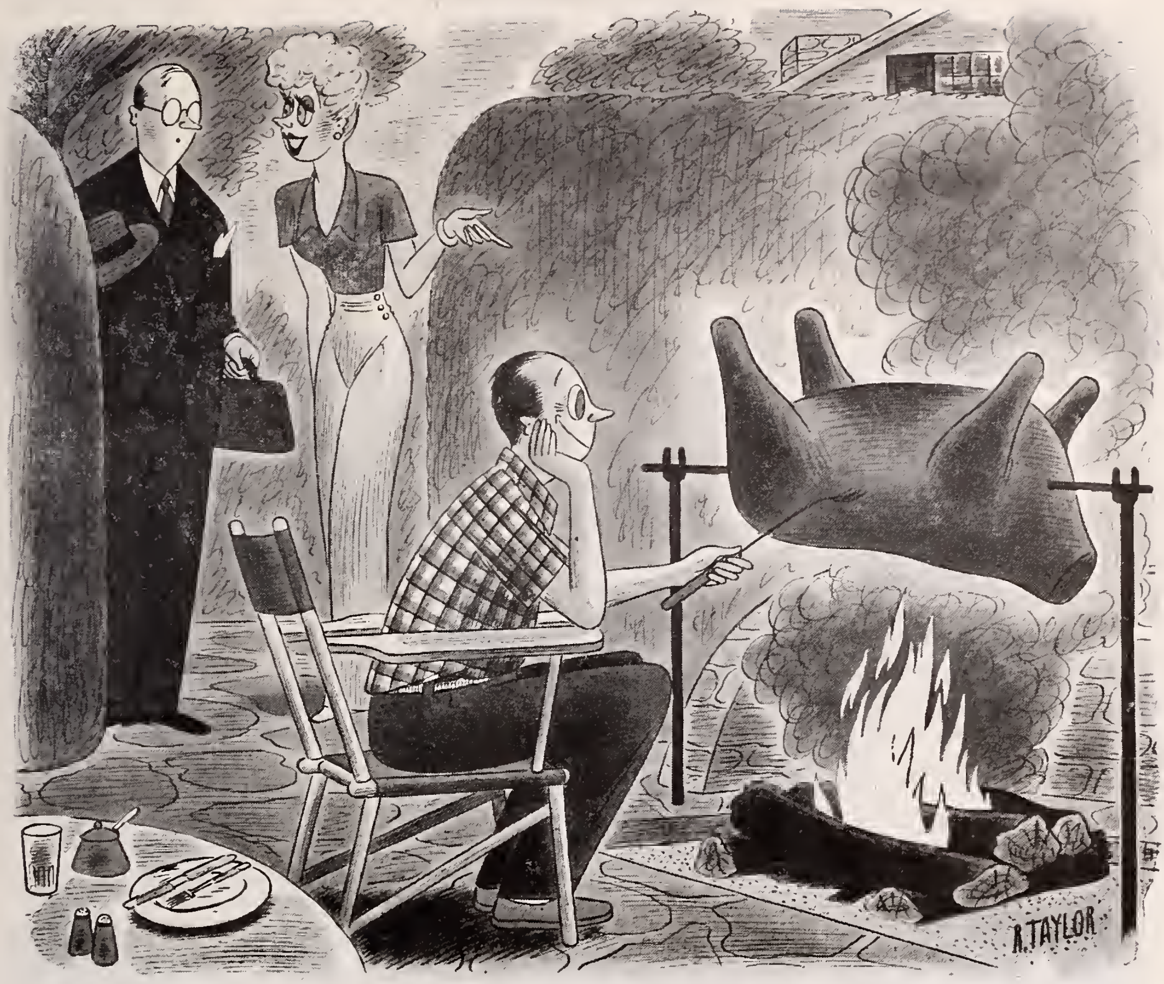

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Public Health in Mississippi Marches On

W. S. LEATHERS, M.D.*
Dean of School of Medicine, Vanderbilt University
Nashville, Tenn.

Mississippi has a great state health department. Its achievements have increased in a remarkable way within recent years. It stands in rank among the fifteen or twenty best health departments in the United States. Of this fact the people should be proud and gratified and I am confident they are. The thoughtful citizenship must be pleased and I am sure this is the case. The conservation of public health is one of the most important functions of gevernment.

Doctor F. J. Underwood showed an interest in the state health work early in his career as a practicing physician. I recall that this was expressed when he was a physician in Monroe County. Thus he exemplified the spirit of the true doctor and exerted his influence among his professional associates in behalf of the state health department. After several years he was asked to accept the directorship of the Bureau of Child Welfare of the State Board of Health and in this position he made significant contributions and outstanding success as an administrator and leader of the national public health movement. Later, in 1924, he became executive officer of the Mississippi State Board of Health, which position he holds with credit and distinction at the present time. He has rendered distinguished service to public health in his native state and has contributed much to the health work of the nation. He is known throughout the country and his influence has been exerted in many notable ways for the elevation and improvement of health standards.

I shall not recount the many significant positions which he has held, but I do know that in all of these places of honor Doctor Underwood has reflected credit upon his profession and state.

Probably the most outstanding contribution which he has made in Mississippi has been the increase in the number of full-time local health departments. I believe now there are approximately sixty-five full-time county health organizations and as much as 84 per cent of the population is under full-time health service. What a fine achievement; The important thing in health work is to bring health to the hearthstones of the families of Mississippi. This is being done. After all that is said and done, the responsibility of the individual for his own health and the health of his community is a principle of great value if recognized and applied. This spirit is being observed by the people of Mississippi as shown by the splendid response which they have made.

There is much that could be said with reference to the accomplishments of the State Board of Health. This has been manifested largely through individual counties which is as it should be. The central organization of the state has been continually improved and the county health officers constitute the long-arms through which the central staff reaches effectively the individual families and communities. This is a wise procedure.

Another notable fact about the State Board of Health of Mississippi is its stabilization. Many members of the present staff, including Doctor Underwood, were valiant workers when I was in charge of the State Health Department. This is one of the most gratifying conditions which I could mention. It means more loyal and efficient service and a sustained interest and effort on the part of the state health service on behalf of the people of the state. The health department has also been free of any influence which would militate against its orderly and efficient service. This is as it should be. This fact is well-known. The State Board of Health has maintained adequate stability but has not been static in functional service and when necessary efficient, capable professional personnel has been added to the staff. Doctor Underwood and his staff are to be congratulated.

I must not overlook the great contribution and support of the medical profession in achieving the splendid results now obvious by the State Board of Health. There is no group of practitioners with whom I have come in contact who have shown more interest in and more loyalty toward public health than the physicians of Mississippi. They have been a bulwark of strength in state health service and as I recall my experiences and long association with the physicians of Mississippi in building up health work there is no one phase of my life which I cherish with more satisfaction than this fact. I am sure that Doctor Underwood has had a similar experience and feels grateful for the assistance which the physicians have given him. It is this unified, coöperative effort between the State Board of Health, the physicians and leading citizens which has contributed so much and given such strength to the state health organization.

---

*Immediate predecessor of Felix J. Underwood, M. D., as Executive Officer of Mississippi State Board of Health.

I am happy to have had the privilege and opportunity to serve the people of Mississippi in coöperation with others in building up its health service and it is a pleasure and honor to pay tribute to Doctor Underwood for the fine way in which he has added luster to his efforts. May he live long and continue to serve well.

A Public Health Statesman

JOHN A. FERRELL, M.D.
Medical Director, The John and Mary R. Markle Foundation
(Formerly Director International Health Division, Rockefeller Foundation)
New York, N. Y.

Mississippi has been very fortunate in its public health leadership. My acquaintance with the state began in 1910 when Dr. W. S. Leathers was in charge of rural sanitation and hookworm control. He had the financial support of the Rockefeller Sanitary Commission through 1915. He began service as state health officer in 1917 and received financial aid from the Rockefeller Foundation. This period, 1917-1924, may justly be characterized as the awakening of a public health conscience in Mississippi.

All the while there was developing in Monroe County the present distinguished state health officer, Dr. Felix J. Underwood. He began the practice of medicine in 1908 and served as part-time county health officer from 1917 to 1919 and as full-time county health officer from 1919 to 1920. He was then called to the State Department of Health by Dr. Leathers to direct the Bureau of Child Hygiene and Public Health Nursing. On July 1, 1924, Doctor Leathers joined the faculty of Vanderbilt University School of Medicine as professor of preventive medicine. He and other leaders in the state at once agreed that Dr. Underwood was the logical choice as state health officer.

Dr. Underwood was prepared in an admirable school of experience for the able leadership he has given to his state in its public health work. His inherent qualities contributed much to his success. He is a man of fine personality, unquestioned integrity, poise, sound judgment, vision, industry, tact, consideration for others, and understanding of fair play and of sound principles on which coöperative relationships should be based. He is a good judge of men. He has been successful in building up the public health services of his state with trained and capable men and women in spite of the low salary scale prevailing in Mississippi.

Dr. Underwood has made a fine record as an administrator. He has inspired confidence among the taxpayers, legislators and the medical profession. Likewise, he holds the respect and friendship of the federal and national health agencies.

While directing the health work of the Rockefeller Foundation in the United States, Canada and Mexico, I welcomed every opportunity to coöperate with Dr. Underwood and his associates because there was never any question about the success of the project. He has always been alert to demonstrate new and better public health practices. During the twenty-year period, 1924-1944, the Rockefeller Foundation made appropriations to Mississippi in excess of $400,000.00. This money was combined with state and county funds to finance sanitation and the control of diseases such as malaria, hookworm, pellagra, tuberculosis, and syphilis. The most recent program supported by the Rockefeller Foundation has been the coördinated school-health-nutrition service. It has been directed to intensify the health protection of the children of the preschool and school ages. I have derived immense satisfaction from the progress Mississippi has made in its health work. To this has been added keen pleasure derived from the close personal friendship which has existed between Dr. Underwood and myself. Nowhere have public and private funds been used more effeciently for the advancement of public health than in Mississippi. For this achievement the people of the state owe a debt of gratitude to Dr. Underwood.

Dr. Underwood's ability has placed him in the category of being a national authority in public health. He is president of the American Public Health Association, and has served as president of the State and Provisional Health Authorities of North America, the Southern Medical Association, the Southern Branch of the American Public Health Association, the National Malaria Committee, the State Medical Association, Mississippi Public Health Association, and several other national organizations. Moreover, he has had membership on national boards of directors and on the boards of foundations. He served a three-year term on the board of Scientific Directors of the International Health Division of the Rockefeller Foundation, 1938-1940. In the field of medicine and public health, Dr. Underwood has earned the title of public health statesman.

A Pioneer in Public Health

THOMAS PARRAN, M. D.
Surgeon General, U. S. Public Health Service
Washington, D. C.

IN EVERY great advance some one individual is in the forefront. In the field of public health in Mississippi, that individual is Felix J. Underwood under whose inspired guidance that state has made notable progress against overwhelming odds. For the past two decades, the state of Mississippi and the United States Public Health Service have been most fortunate in having Doctor Underwood as the leader of Mississippi's public health program. Long identified with public health work, he has played an important part in putting public health on a firm basis in the South. No public health colleague of Doctor Underwood but has been impressed by the pioneering spirit, the foresight, and ingenuity which have gone into the development of public health in Mississippi. Always prompt to accept her share of responsibility in any coöperative program designed to improve the health of the people, this state has already received ready support from both federal and private institutions. Since the creation of the first State Board of Health in 1877 she has waged a great fight against preventable diseases and death.

Let's look at the record. Death rates from tuberculosis, malaria, pellagra, typhoid fever, and diphtheria have been cut in half. Despite the lack of adequate hospital facilities, infant mortality declined from 64.6 per 1,000 live births in 1922 to 46.9 in 1942. Maternal mortality likewise dropped from 6.8 per 1,000 births in 1922 to 4.2 in 1942.

These advances represent triumphs in a state which long had the lowest per capita income in the nation; and which as late as 1941 had a per capita income of only $220 a year.

Another factor — the rural-urban distribution of population — has presented a problem far out of proportion to the same problem in other states. Primarily agricultural, approximately 80 per cent of Mississippi's population of 2,183,276 live in rural areas. To insure health protection for such a population is a difficult task, requiring skillful planning and the wisest use of personnel, funds, and facilities.

In 1924, the year of Doctor Underwood's appointment as State Health Officer, Mississippi abolished its inadequate system of local public health agencies and created county or district health departments. Since that time there has been a steady growth of rural health service. When the Social Security Act was passed in 1935, only 540 of the more than 3,000 counties of the United States had health departments — an average of 11 per state, yet, at this time Mississippi had 25 counties with full-time health departments and 57 with part-time services. By June 1943, this number had increased to 65 counties with full-time health departments serving approximately 84 per cent of the population.

Following in the tradition of his predecessors, Doctor Underwood has worked zealously to lessen the amount of sickness and death caused by malaria — a disease that has sapped the vitality of thousands of Mississippians for years. Through his efforts, malaria control has developed into a highly efficient branch of his department. A marked degree of success has been achieved. The mortality rate from malaria decreased from 37.2 per 100,000 population in 1922 to 10.7 in 1939. When wartime conditions increased the malaria hazard, persistent and expanded malaria control measures further reduced the rate to 3.1 per 100,000 — evidence that the disease has retreated to a few areas of the state in which the infection is self-perpetuating.

Throughout the past ten years, Mississippi has sought and obtained the support of the U. S. Public Health Service in her battle against the malaria mosquito. Since 1941, the Federal Malaria Control in War Areas program has been active in the protection of some 40 war establishments and cities.

Consistent gains have also been made against tuberculosis — a major health and economic burden to Mississippi, as well as to the nation. Although the incidence of tuberculosis in Mississippi is one of the highest among the states, in the past twelve years it has dropped from first to sixth place as a cause of death. This, in spite of great limitations in funds and facilities.

The major portion of Mississippi's tuberculosis burden is among the Negro population which comprises approximately 50 per cent of the state's inhabitants. Of the 1,092 Mississippians who died of tuberculosis in 1942, 817 were Negroes — an approximate ratio of 3 to 1, which has been maintained consistently year after year. To deal with this problem effectively presents a task of immense proportions. Only 74 beds are available in the entire state for treatment of tuberculous Negroes—40 at the state tuberculosis sanatorium, which maintains 350 to 400 beds for white patients. With a full realization of the inadequacies of treatment facilities for both races, Doctor Underwood recently testified: "We need a minimum of 1,200 beds for the tuberculosis cases in the state."

Most encouraging in this connection is the recent public health legislation approved by the President on July 3, 1944, which provides for a national tuberculosis control program. The act authorizes an annual appropriation of funds — $10,000,000.00 for the fiscal year 1945 — for the prevention, treatment, and control of tuberculosis, including grants to states.

In one sector of tuberculosis control, Doctor Underwood has proved that even lack of money and beds may be partly offset by coöperation and full use of existing facilities. A State Selective Service regulation requires that any man rejected by Selective Service because of tuberculosis shall be admitted immediately to the Mississippi sanatorium for clinical examination and diagnosis. As a result, several hundred men rejected on suspicion of tuberculosis have been reclassified as available for military duty. If active tuberculosis is found, the rejectee is returned to his home and placed on a waiting list of patients to be admitted to the sanatorium. The waiting period is usually about one month. Thus, coöperation between the State Board of Health and the Selective Service has made it possible for Mississippi to take the first step toward tuberculosis control, which can turn into a victorious march in the next few years.

Mississippi has achieved gratifying results in the rehabilitation of men rejected for military duty because of venereal infection. By July 1, 1943, 30,690 of the 35,000 rejectees had been located. As of the same date, 37.6 per cent of this number were either serving in the armed forces or had become available for military duty. In the light of limited personnel and treatment facilities, these figures indicate a high degree of success.

With one of the highest prevalence rates in the United States, the venereal disease problem in Mississippi has been made more acute by the influx of thousands of military personnel into the state. For a number of years, Mississippi has endeavored to establish a venereal disease control program commensurate with her needs. In the fiscal year 1943, this state led all other states in the number of clinics treating venereal diseases. Mississippi also ranked first in the amount of anti-syphilitic drugs distributed by the State Health Department to private practitioners, clinics, and hospitals. Treatment facilities have been augmented by the establishment of three Rapid Treatment Centers in Mississippi.

Strengthened and expanded efforts by the State Department of Health, in connection with the military program of venereal disease control, have resulted in an improvement in the incidence of venereal disease as is indicated by the attack rate in military personnel.

Much remains to be done before the fight against venereal disease is won in Mississippi —or in the nation. The new medicinals and techniques being used today against venereal infection hold a promise for the eradication of syphilis and gonorrhea in the not too distant future. Our national awareness — and more importantly — our recognition of the problem will hasten this day.

In 1929, Mississippi became the fourth state in the nation to establish a division of Industrial Hygiene. This forward step is due almost entirely to Doctor Underwood's leadership, since the state still has no workmen's compensation law to support the health department's efforts toward industrial health protection.

No other public health activity is so important in a rural state as is environmental sanitation. In the past few years, Mississippi has taken many forward steps in this direction.

Under the provisions of the Lanham Act, 12 waterworks and sewage projects have been completed in 10 communities where the problems of inadequate sanitation facilities had been magnified by the impact of war activities. Although these sanitary improvements were made by wartime necessities, they are lasting assets to public health.

In coöperation with the Farm Security Administration, the sanitary engineering division of the Mississippi State Health Department carried on an extensive program designed to rid the farmhouses of Farm Security Administration clients of mosquitoes, and to equip them with safe water supplies and sanitary privies. Under a similar program, the same improvements were provided each family living in resettlement projects administered by the Farm Security Administration.

Through federal-state coöperation over a period of seven years, rural sanitation was significantly advanced by the federal agencies concerned with this work, Mississippi carried on with a similar program put in operation by its State Health Department. The incidence of hookworm, typhoid fever and other diseases spread by human wastes has been greatly lowered as a result of these improvements in environmental sanitation. In addition, the enforcement of standard ordinances and regulations for milk and food sanitation has afforded the state a higher degree of protection from contaminated food and drink.

Since these and other health improvements in Mississippi have been achieved despite heavy losses of trained personnel and greater increased demands, indeed even greater improvements are assured for the future.

Doctor Underwood's record of service speaks for itself. Because of his record, thousands of Mississippians have enjoyed a fuller measure of health and happiness. By his record he is known and highly revered by his medical and public health colleagues throughout the country. I feel privileged to have been associated with Doctor Underwood for so many years. As a colleague and personal friend, I look forward to our continued association.

Felix Joel Underwood

W. A. EVANS, M.D.
Aberdeen, Mississippi

DR. UNDERWOOD is about to finish his service as president of the American Public Health Association. The honor of holding this position, now at the stage of life when his powers are at their peak of achievement, entitles him to years of rewards heaped on rewards, makes it appropriate that the *Mississippi Doctor* should tell his friends something about him.

Until now he has had to strive for everything his ambition made him wish for. Now the heights have been scaled and he has reached the plateau of fulfillment. In the years of striving doubtless he often felt the effort required was too great for the reward. From now on rewards will roll up with but little effort to achieve them.

Doctor Underwood was born in the northwest corner of Monroe County almost on the lines separating this county and Lee and Itawamba counties.

The Bigby Fork community in which he lived was composed of friendly neighborly folks —an environment which bred knowledge of human nature and the behavior of people rather than of books. It made for the content of happy days rather than the drive of ruthless ambition. As a young school boy he was happy and pranky but with no apparent ambitions — none worn on his sleeve. He liked to play and fight. Once when two schoolmates were rolling on the ground in a rough and tumble fight, he rolled them into a ditch of ice cold water. The fight was over — common sense, judgment and some humor mixed. All his life he has shown a mixture in good proportions of common sense and judgment compounded with some humor. Then, somehow from somewhere ambition struck him like lightning from the blue. He became studious. He led his classes in scholarship. The Nettleton small-town school became no more than a springboard.

He wanted to study medicine. He borrowed money and went to the Medical School of the University of Tennessee where he was graduated in 1908. There he found that lack of money was only one of his difficulties. Medicine had become a highly technical summation of a group of highly specialized sciences. The rules of the medical schools called for a broad educational base. This the Nettleton school had not furnished.

The mortar in which he worked was a lean mix. But he richened it with hard work and a relentless determination. Having graduated, he bought a horse, named him for historic Courage and opened an office at the crossroads. His next step up was to the position of county health officer. That job he had to learn by doing it as had been the case with his position of country doctor. Then he became a bureau chief in the State Board of Health. Now, he was on his way toward his life's work but still he must learn his job by doing it.

We get a sketchy idea of the rewards and also the opportunities for service which are crowning his life as we read a list of his positions and connection printed in *The Southerner*, a biographical encyclopedia of Southern people (Southern Editors Association, New Orleans, Louisiana, 1944).

He practiced medicine and served as part-time health officer, Monroe County, 1908-1916; secretary, Northeast Thirteen Counties Medical Society, 1912-1925; county chairman, Monroe County Chapter American Red Cross, 1912-1916; member, Council Mississippi State Medical Association, 1912-1919; chairman of this Council, 1914-1919; chairman Monroe County Democratic Executive Committee, 1916-1920; director Monroe County Health Department, 1917-1920; member of The Mississippi State Board of Embalmers, 1924 to date; president State Medical Association, 1919; member governor's staff, 1920-1923; director Bureau Child Hygiene, Mississippi State Board of Health, 1921-1924; councilor for Mississippi to Southern Medical Association, 1921-1927; executive officer and secretary Mississippi State Board of Health, July 1924 to date; member and chairman for a number of years Committee on Public Policy and Legislation of the State Medical Association; secretary Board of Trustees Mississippi Stat Tuberculosis Sanatorium, 1924 to date; member executive committee Mississippi Tuberculosis Association, 1924 to date; fellow American College of Physicians, 1927; chairman National Malaria Committee, 1928; member, 1928-1938, and chairman, 1936-1938, State Commission for the Blind; member board of trustees Mississippi Children's Home Finding Society, 1928 to date; vice-chairman of that Society, 1939, and president since 1941; member Gulf and South Atlantic Mosquito Congress, 1928; member Harrison County Mosquito Control Commission, 1929; chairman Child Hygiene Committee, Conference State and Provincial Health Authorities, 1930-1942; member same Committee on Milk, 1930; president Southern Medical Association, 1931; member State Board of Examiners for Nurses, 1930 to date; president of that Board, 1931 to date; staff member, Baptist Hospital, Jackson, Mississippi, 1931 to date; member board of trustees Southern Medical Association, 1931-1937; chairman of board of trustees, Southern Medical Association, 1937; member Committee on Prenatal and Maternal Care, White House Conference on Child Health and Protection, 1931; general chairman Mississippi Council for Child Health and Protection, 1931; member Governing Council Southern Branch of the American Public Health Association, 1932; Mississippi referee, American Public Health Association, 1933; member, executive committee, State Board of Public Welfare, 1933-1935; member executive committee, Conference State and Provincial Health Authorities of North America, 1933; chairman Regional Executive Board Southern Branch American Public Health Association, 1933; delegate from Mississippi State Medical Association to American Medical Association, 1933-1940; fellow American Public Health Association, 1934; public health adviser to President Roosevelt's Social Security Committee, 1935; appointed by President Roosevelt an official delegate to seventh Pan-American Child Congress, Mexico City, 1935; secretary State Executive Committee for the Control of Cancer, 1936-1939; chairman of that

Committee, 1939 to date; president State Cancer Committee, 1936, president State Conference of Social Work, 1936, member State Vocational Board, 1936 to date; president Mississippi Public Health Association, 1937; honorary vice-president Mississippi Social Hygiene Association 1937 to date; state chairman of Celebration of President's Birthday, 1938 to date; member Board of Scientific Directors, Rockefeller Foundation of New York, 1938-1940; vice-chairman of that Board, 1940; president State and Provincial Health Authorities of North America, 1938-1939; memmer advisory council for Woman's Auxiliary to Mississippi State Medical Association, 1938 to date; member Subcommittee on Public Health, American Congress of Obstetrics and Gynecology, 1938; member advisory board for Public Health and Child Welfare General Federation of Women's Clubs, 1938; member Planning and Report Committees White House Conference on Children in a Democracy, 1939; member Advisory Committee National Organization for Public Health Nursing, 1939-1944; member Subcommittee on Membership National Malaria Committee, 1938; member National Housing Committee, 1939; member Technical Board on Public Health, The Commonwealth Fund, New York, 1939 to date; technical adviser, Committee on Public Health Activities, The Commonwealth Fund, New York, 1935-1939; chairman Subcommittee on Malaria Prevention Activities National Malaria Society, 1940-1943; member Children's Bureau Advisory Committee on Maternal and Child Care, 1940; member Governing Committee American Public Health Association, 1940 to date; member Standing Committee on State Programs and State Conferences, National Citizen's Committee of White House Conference, 1940; president Southern Branch American Public Health Association, 1941; appointed by President Roosevelt as official delegate to the Eighth Pan-American Child Congress, 1942; member State Consumers Advisory Council, Office of Price Administration, 1942; member Children's Bureau Commission on Children in Wartime, 1942-1946; director-at-large National Tuberculosis Association, 1942-1944; member, Health Advisory Committee on Community Health, Chamber of Commerce of the United States, 1943; member state committee, Procurement and Assignment Service for Nurses, 1943; member of subcommittee on Educational Qualifications of Personnel of Vital Statistics and Vital Records American Public Health Association, 1943; adviser, Medical Survey Program, State Selective Service System, 1943; member, Committee on Nominations, American Social Hygiene Association, 1944; member board of directors, Mississippi State Safety Council, 1944; president, American Public Health Association, 1944; member Jackson Rotary Club, member Alpha Epsilon Delta Fraternity.

What is the American Public Health Association of which Doctor Underwood is now president and what is its history? Theoretically, it is an organization of health workers operating in the United States and other countries in South and Central America. However, the membership from the United States in recent years far outnumbers that from all other countries combined.

The organization is about seventy-five years old and its membership is in the thousands.

It began in an effort to control cholera—to prevent that disease from invading America. Presently, the problem presented by cholera had disappeared but yellow fever had become one of the chief concerns of our national life. In that period, the health officers of the deep South were the most active members in the promotion of the American Public Health Association.

The program of which the organization is proudest is that in which Walter Reed reported his research on yellow fever.

Today members of the Association are engaged in solving hundreds of health problems.

Mississippi's Greatest Asset

SEALE HARRIS, M.D.
Birmingham, Alabama

IT IS fitting that the *Mississippi Doctor* should issue a Felix J. Underwood number because he is Mississippi's first citizen and her most constructive statesman. Mississippi's greatest asset is her most efficient State Department of Health, coördinated, as it is, with the various county health units. It is said that any successful institution is but "the lengthened shadow of a great man." In Mississippi, the shadows of three great men, Drs. D. V. Galloway, W. S. Leathers and Felix J. Underwood, may be seen in the development of an organization that is protecting the citizens of that state from preventable diseases. Each played an important part in the upbuilding of a health department that is not excelled in the United States. Dr. Leathers, recognized as the outstanding man in public health education in the world, said to me on several occasions: "Felix Underwood is the greatest health officer in the United States." I wonder if the people of Mississippi realize what her Department of Health means to them, not only in saving lives and preventing illness, but in their prosperity. Without public health protection no great industry would have been established on the Mississippi Gulf Coast.

In July of this year I enjoyed a visit to Longfellow House at Pascagoula, Mississippi, as the guest of Mr. Robert I. Ingalls, founder and chairman of the board of the Ingalls Shipbuilding Corporation. Longfellow House was built more than a hundred years ago. There is a legend that Longfellow wrote some of his beautiful poetry while a guest of the original owners. Mr. Ingalls has remodeled and modernized the interior of this beautiful and classical antebellum home, and he is developing the grounds around it so that it will be one of the show places of the South.

In looking over what is said to be the finest shipbuilding plant in the world, and which Mr. Ingalls intends as a permanent industry in Mississippi, I called his attention to the fact that had it not been for the sanitation of the Gulf Coast following the methods developed by Major General William Crawford Gorgas in Havana and on the Canal Zone, no such industry could have been operated during the summer on the Gulf Coast.

Forty years ago every industry on the Gulf Coast from Galveston to Tampa was paralyzed by the last epidemic of yellow fever that occurred in the United States. In 1904 every citizen of southern Mississippi, who was financially able to do so, sent his family away from home for the summer. Now, with Mississippi's efficient health department on guard to prevent the spread of the formerly dreaded "yellow Jack," there is not the slightest danger of another epidemic of yellow fever.

Then, there was typhoid fever. I recall one case which alone cost the state many millions of dollars and seriously retarded the development of the Mississippi Gulf Coast. In the early part of 1910 I was called in consultation with the lamented Dr. Charles LeBarron, Sr., to see Captain Jones, who had developed Gulfport, built the Gulf and Ship Island Railway, the interurban trolley line from Pass Christian to Biloxi, and erected hotels in Gulfport and Hattiesburg. On my arrival in Gulfport, Dr. LeBarron told me that Captain Jones' mental and nervous breakdown was due to working from four or five o'clock in the morning to ten or eleven o'clock at night. He said that Captain Jones was worth twenty millions of dollars, but that he worked harder than any of his employees; and asked me to advise him to rest for several months. I shall never forget seeing old Captain Jones, who, though only about 65 years of age, was senile, weeping like a child whose toy had been taken away from him. Sobbing, he said to me: "Doctor, I am a wreck! I am a hopeless wreck!" I said to him: "Captain Jones, you can be gotten back on the track again and resume your work, provided you will leave Gulfport and get a rest." He then wept louder and exclaimed: "I cannot afford to quit now!" The old man would not leave Gulfport. His son, "Bert" Jones, a graduate of Harvard, was admirably fitted to take over his father's great business, but he was handicapped by having to consult with his father about many details.

In the summer of 1910 a serious epidemic of typhoid fever, which was traced to milk, occurred in Gulfport. So many deaths resulted that milk trucks were called "wagons

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"Too Low They Build Who Build Beneath the Stars"

G. S. BRYAN, M.D., Amory, Miss.

I HAVE KNOWN Dr. Felix J. Underwood for perhaps forty years. My first meeting with him was casual and, beyond the impression that he was well poised, self-possessed and intelligent. I gave no special attention to the meeting. He then lived at Nettleton, Mississippi, and was about twenty years of age. Pretty soon thereafter he sought an interview with me and told me that he had decided to become a doctor and wanted to discuss the matter with me. I was particularly impressed by the careful business-like manner with which he approached the matter and was convinced that he meant to make a success of the undertaking. He told me that he had given thought to the matter for a considerable time and had been accumulating funds to apply to the expense of the undertaking. I gave him what encouragement I could by assuring him that I felt that he could not fail and that the profession stood in great need of young men of his type and mentality. I kept in touch with him and watched his course from that day.

At the end of his junior year in medical school, Felix Underwood took the examination for license to practice, and then took up a good country work that was vacant at that time. After a short time he returned to college and completed his undergraduate work. In 1908 I became a member of the State Board of Health and in collaboration with Drs. Darrington, Williams, Little, Ross, Cooper and others a program of public health was inaugurated. I think it was in 1910 I contacted Dr. Underwood and suggested to him that public health work, in my opinion, offered splendid opportunities to young doctors who were properly endowed and fitted by temperament and wisdom to make a success of the work and advised him to go into it with the intention of making it a career. In his characteristic way he said he would think it over and through. After some time he told me he was ready to begin. So I asked the Board to appoint him part-time health officer of Monroe County. The appointment was given him.

The balance of the story needs not to be told; for it is history well known to every doctor and every man and woman in Mississippi. The work that has been done and is being done by the Mississippi Board of Health is not excelled in any part of the nation. It has been marvelously successful and outstanding. This success is a monument to the purpose, skill and diplomacy of Felix Underwood. Today he is known and recognized as one of the world's great public health promoters. In fact, his work, when completed, will rank with that of Gorgas and other men who have immortalized themselves in this work. He has held and graced many places of honor, including the presidency of Mississippi State Medical Association, the presidency of the Southern Medical Association, and now the presidency of the American Public Health Association. In all probability the office of Surgeon General of Public Health awaits him and should public health be accorded a place in the departments of our national government (as it should be), no better man could be found who would grace the cabinet position as Secretary of Public Health.

Felix J. Underwood has honored the profession of medicine and the state of Mississippi has been greatly benefited by his painstaking work and splendid ability.

The Romance of Efficiency

W. W. CRAWFORD, M.D., Hattiesburg Miss.

In the year 1924 it so happened that I was president of the Mississippi State Board of Health. Dr. W. S. Leathers, who had developed the service to a high level of efficiency during fourteen years as executive officer, notified me that he had been offered the position of dean of the College of Medicine of Vanderbilt University.

When asked for suggestions of a successor Dr. Leathers said without hesitation that he had a young man on his staff who in his judgment possessed all the potentialities for highly satisfactory service. His name was Felix J. Underwood. I knew very little about the doctor at that time but had implicit faith in Dr. Leathers' judgment and therefore presented the name to the board. A majority of the members had already tentatively committed themselves to another man, but when a vote was taken it was unanimous. Thus began the career of a man who from sheer merit has been honored by his state, by the South, and who at this time is president of the American Public Health Association.

Highlights of American Public Health: 1944

REGINALD M. ATWATER, M.D., Dr.P.H.
Executive Secretary, American Public Health Association, New York, N. Y.
New York, N. Y.

ANYONE who undertakes a bird's eye view of the important developments in the national public health picture will certainly be impressed by the very dynamic situation presented in 1944. One may take only examples in a brief resumé, but they are indicative of the trend.

The U. S. Public Health Service will shortly complete 150 years of organization, during which it has passed through many phases. On July 3 President Roosevelt signed an act which reorganized the Public Health Service and recodified its laws. The present law reflects an increasing dependence which the Federal Government is placing on this agency in duties which were never contemplated in 1798 when a service for sick seamen was established.

This new law makes available to the Public Health Service $20,000,000 per annum under circumstances which give the Service more discretion in the distribution of these funds through state aid than it has had in the past. Another fund of $10,000,000 per annum is authorized for the establishment of a tuberculosis service now being organized and which for the first time will implement with substantial funds the planning within the Public Health Service to strengthen state and local preventive services in tuberculosis. The recodification of the laws relating to the Service are better adapted to the expanding prestige of this Federal agency which now for more than 8 years has been under the active leadership of Dr. Thomas Parran, recently reappointed for a third term.

The appropriations for public health begun in 1936 under the Social Security Act have continued to have their effect. To a large extent the Act of 1944 just mentioned will replace Title VI Funds heretofore coming to the Public Health Service through the Social Security Act. Title V Funds, which are administered by the Children's Bureau of the U. S. Department of Labor, are continuing, as well as the appropriations under the Venereal Disease Control Act administered by the Public Health Service. The increased amount of Federal appropriations since 1935 has been very significant. It is a tribute to the Federal services that for the most part these funds have been administered with a high level of support and coöperation from state and local authorities.

Outstanding in 1944 are the expanding responsibilities under the emergency medical program for mothers and infants of service men. This plan is administered by the Children's Bureau under legislation through which Congress unmistakably indicated its intent to lift the burden of cost for material and infant medical and hospital care from the shoulders of its lower paid service men. It has been challenged as representing a new and questionable form of Federal subvention for medical care, but the fact that it has been carried out in such good spirit and with such excellent quality of service in large areas is to the credit of the profession and of those charged with its administration. The seven-year trend downward even during wartime has reduced the infant mortality rate almost a third and the maternal death rate more than one half from 1936 to 1942.

Important national services are carried on by the National Institute of Health, an agency of the U. S. Public Health Service, with very broad powers and duties of investigation. Other important branches of the Federal service include the National Cancer Institute, the Division of Industrial Hygiene and the Division of Marine Hospitals, all identified with the Public Health Service.

The Surgeon General of the Public Health Service recently reported that 44% of Federal funds allotted to the states were used for state-wide health services, with sanitation and sanitary engineering heading the list of expenditures and supervisory and consultant services to local health departments holding second place. Laboratory services, vital statistics, industrial hygiene, tuberculosis control and health education were the next services in order of amounts expended. About 9% of the funds were budgeted for training of public health personnel.

The expansion of the number of counties in the United States having local health departments under full-time direction of a qualified health officer has been very notable. On January 1, 1935, there were 534 such counties and by the end of 1941 this number had increased to 1669. The use of Federal funds in combination with state and local appropriations has resulted in wide expansion of basic services on the local level and has made possible the technical training of large numbers of individuals for positions in official health departments. Even with all this attention the job is still not yet complete. About a year ago 47% of the population of continental United States was provided with full-time health services by local governments in units of one or more counties or by individual cities in these counties. About 12% of the remaining population in 493 counties and in 17 states had full-time health service provided in single or multiple county health units by state governments. Some 12 million people, living in 77 cities, had full-time health service through city government, though they were not provided with full-time units in their counties through either county or state auspices. Finally, more than forty-one million persons, or 31% of the population, were not provided with any full-time local health service. These persons were scattered in 1687 counties in 41 states. It is gratifying to note the existence of planned coverage in Mississippi and some of the other southern states, where for many years it has been a policy to give the public full-time service as rapidly as it could be made available.

In contrast with these unsatisfactory conditions of a few months ago it is now possible to report that 47 of the 48 states have laid out plans for covering the entire area of each state with full-time service. It is recognized that many of these plans cannot be fully effective so long as the war lasts, but with its conclusion there will be great advantage in having a well thought out scheme by which modern sanitation and the benefits of organized public health can be brought to every crossroads. This effort for promoting the planning of local health units has been carried on by the Committee on Administrative Practice of the American Public Health Association.

It is commonplace to think of the tenure and career service of health officers as being unsatisfactory and subject to the whim of political caprice. Very definite progress in the right direction can be recorded on this problem. Five years ago only about one-half the states had even paper plans for civil service or merit system control of appointments in public health. Now there are plans in all states and in most of them they are beginning to be quite effective. As recently as three years ago there were no methods available for scientifically examining professional workers in public health like doctors, public health nurses, engineers, epidemiologists, maternal and child health workers, etc. Today that lack has to a large extent been corrected by the development of examination materials according to the most approved form. These are now available to all state merit system and civil service agencies. By this means it is possible to test public health staffs and to make sure that the public employs the best talent available. Once employed, these persons are protected against political caprice, and career service is encouraged. Few features of the 1944 highlights in public health are so fundamentally significant as these.

During the lifetime of most of the practicing physicians now active it has become possible through public health means to control typhoid fever and the diarrheal diseases of infants and older persons, greatly to reduce tuberculosis and malaria, to make great strides toward conquering the venereal diseases, to do away with diphtheria, to reduce infant and maternal mortality to less than one-half of the previous levels and to protect the health of the general population against communicable diseases and other calamities that were accepted as normal in another generation.

Good as these achievements are during the last few years, it may be said that the public health professions have set before themselves objectives that reach even farther and more significantly toward the general welfare. The chance of changing nutrition for the better is most encouraging. Cancer can be reduced. Mental hygiene can be improved. Rheumatic fever and its control challenges the best minds. Among the important causes of death which can be significantly reduced are home and farm accidents where the technics developed in health departments for health education can be effective.

Among the tools which we have for accomplishing these objectives are the modern knowledge of epidemiology, methods of public health education, increasing staffs of public health nurses, of sanitary engineers, of the public health laboratory and of vital statistics.

The financing of public health is much more generally accepted as the proper function of government than at any previous time. Perhaps most significant of all is the fact that trained men and women are increasingly available for this work. In the last 10 years several thousand doctors, engineers, laboratory workers, nutritionists, industrial hygienists and specialists in maternal and child health, tuberculosis, venereal diseases control, hospital administration, etc., have been trained. A very large proportion of public health nurses has had at least some graduate formal training in this specialty. Dentists are being prepared in public health as never before and school health workers are far more aware of the scope of their specialty than previously.

A number of foundations have exerted tremendous influence over public health practice and progress. Likewise, membership organizations, either exclusively of professional public health workers or of professionals and laymen alike, offer powerful support to national health programs. The largest and most influential of these are federated in the National Health Council with offices in New York City. These voluntary organizations have a definite and important place in the public health structure. Their function is to close the gap between what a self-governing people ought to have and what they can get in health services. Their functions in health education, in demonstrating promising activities whch have not yet reached the point where they can be supported by tax funds, in research, and in bridging over the lacks in the programs of the governmental organizations, continue to be vital to the advancement of public health in the United States. These are unique American institutions. A nation-wide survey of these voluntary health agencies is being conducted currently by a committee of the National Health Council and it is anticipated that results will shortly become available.

However if one considers these features characteristic of the 1944 situation, he must be impressed with its dynamic quality. He must be impressed also with an awareness that public health services are society's recognition of the fact that health is not entirely an individual matter but that the health of our neighbor may affect our own. In community living no one is safe unless all are safe.

We are proud of you, Felix.

MISSISSIPPI'S GREATEST ASSET

(Continued from page 91)

of death." "Bert" Jones planned to build a modern sanitary dairy, which would have cost approximately $35,000.00. His father vetoed the plan. In December "Bert" Jones developed typhoid fever, and on Christmas day I was called to Gulfport in consultation, in time to witness the death of a man who, had he lived, would have spent millions in the development of the Mississippi coast. Captain Jones and his wife died soon after the death of their son. The Jones properties were sold and the heirs moved from Mississippi, carrying with them the Jones' millions.

The Ingalls Shipbuilding Corporation at Pascagoula has 12,000 employees, who with their families, make up a modern city of 30,000 inhabitants. They are as free from tropical diseases as if they lived in New York or Chicago. General Gorgas predicted that the South would become the most populous and the most prosperous section of the United States, and that great industries would locate in the South where they can operate twelve months in the year; and that the fertile lands of the South, capable of raising several crops a year, would attract farmers from other sections.

Dr. Felix Underwood, the staff of the state health department, including the county health officers, and their associates, have stamped out malaria, typhoid fever, hookworm, dysentery and other communicable diseases to the extent that the death rates in Mississippi are lower than those of New York and Pennsylvania. He and his confrères have thus prepared Mississippi for the great industrial and agricultural development that is certain to come to a great state.

Dr. Underwood's personality — a word which may be defined as a summary of the characteristics of a gentleman — has had much to do with his success as an administrator. His friendliness and genuine cordiality have brought to him the hearty coöperation of the medical profession of Mississippi in a way that has been responsible largely for his success in securing large appropriations from the state with which to "purchase public health." No man has ever deserved success more than Dr. Underwood, and it is gratifying to his friends that he is so highly appreciated by the people of Mississippi and by the medical profession of the state and the nation.

Occupational Illnesses in Cotton Industries*

1. "COTTON FEVER"

WAYNE L. RITTER, M.D., and MORRIS A. NUSSBAUM, M.S.P.H.
Mississippi State Board of Health, Division of Industrial Hygiene

By far the most common occupational disease in Mississippi is one that has received almost no notice from our physicians. Foremen in cotton seed oil mills, textile mills and gins have had some experience with it. It is an acute illness that is referred to by a number of different descriptive names — cotton fever, card room fever, dust chills or cotton colds being the most common. Occasional inquiries in the different types of cotton industries throughout the state surprised us by showing the prevalence of similar symptoms among new employees in all these places. A more detailed investigation was then undertaken.

As a beginning, visits were made to 37 cotton seed oil mills. All but two of these mills had some knowledge of "cotton fever" or "dust chills" among their employees. In the mills where the superintendents seemed unacquainted with this condition, their negroes in the linter rooms and seed houses were well aware of it. We then had talks with managers and employees in gins, compresses, mattress factories and textile mills. The natural history of the disease will be reported as a summary of our interviews and personal experience.

It is conceded by everyone that a period varying from three to thirty days is required for new employees to "become adjusted" to working in cotton dust. Superintendents believe that the adjustment period is due to something peculiar about cotton dust itself.*

Among new employees working in cotton dust about 10 to 50% develop a definite chill. The onset of this condition may take place during work on the first day but it more frequently develops after the employee returns from work to his home in the evening. This chill is followed by a fever (100°F — 103°F) that is almost invariably gone by morning. A headache usually accompanies the fever. Occasionally there is a nose bleed or nausea, even vomiting. This identical experience may be repeated for the first several nights. Such repetition of a "dust chill" is fortunately uncommon. For the next few nights this new employee usually has only a slight recurrence of the fever and a vast sensation of exhaustion.

Usually by the end of the first week, but almost certainly by the end of the first month of employment, these symptoms no longer develop in the individual as long as he continues in the same job. If during the first year of employment this individual should be away from work for about two weeks he will probably repeat this immunizing experience — this second bout of cotton fever is usually milder —seldom any chill or nausea, and temperature usually less than 100°F. Because of the mildness of the symptoms this recurrence is frequently overlooked. Older employees who may have spent many years at this type of work usually have to be away from the dust for a month or two before they need anticipate a recurrence.

The cotton seed crop is of course collected in the fall and by late spring or summer cotton seed mills have completely processed their supply. Because of this many superintendents and their men have to go through this cotton fever every fall having lost their immunity during the summer.

There was a wide variation in the superintendents' estimate of the percentage of his men who developed a chill. It was found on analyzing our answers that in the mills where the superintendent himself had chills, the highest incidence was also reported among the employees. This was probably motivated by the fact that a superintendent who developed the condition himself would be more prone to have a close and sympathetic understanding of similar problems among his men. In one of the most modern and best maintained mills in the state, the superintendent told us that half of his men in linter rooms and seed houses got dust chills at least once a year. In a very poorly maintained mill where the superintendent had had no dust chills, he estimated the incidence at only 2 to 5%.

Cotton seed is usually bought from gins in carload lots. Unloading these freight cars is a dusty business — so much so that a man working in this environment soon becomes completely covered with about ¼-inch coating of cotton linters that gives the man an appearance of being mildewed. The concentration of cotton dust in such a job may be much greater than the dust concentration to which the individual has become adjusted; consequently, being transferred to such work may produce a "dust chill." This observation has been made by almost all the superintendents and has given rise to the belief that a worker only gets accustomed to that concentration of dust to be found in his usual working environment.

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*When oil has been pressed out of cotton seeds, the residue is sometimes ground into a fine meal. Although there may be more dust in the air from this operation than is usually present in a linter room or seed storage house, employees who work only in the dust from meal almost never require an adjustment period or get cotton fever.

Occasionally seed may sour or be of extremely poor quality. The processing of such seed sometimes gives rise to severe dust chills, with nausea and vomiting.

Shearing the linters from the cotton seed formerly gave rise to a great deal of dust. Linters are now almost invariably collected by local exhaust systems. Since the installation of these "flue systems" into the mills all the superintendents have noted a reduction in the incidence of "dust chills." It is admitted, however, that it still takes time for new employees to get used to the work.

In an effort to get a clearer idea of some of the clinical features of this occupational disease, one of us (WLR) spent a day unloading seed from a storage house onto a conveyor belt. By afternoon of the working day a slight degree of chest pain was noted when a deep breath was taken. The inhalation of a cigarette was so invariably associated with attacks of coughing that this regular diversion was entirely discontinued for the remainer of the day.

Although dust chills may occur among new employees after a few hours of work, by the end of the day there had been no chill. Only extreme fatigue was noted but this was attributed to the unusual labor which was considerably more violent than a normal occupation for the author. The work brought no appetite. There was, however, no vomiting; nausea should be rated as mild.

By 6:30 p.m. temperature was 99^{2}°F. This rose to 100^{2}° at 9:30. By 11:30 p. m. just before falling asleep, temperature was back to 99^{6}°. The following morning there was no fever at all, nor any subsequent recurrence of it.

Also on the following morning a white blood count showed 11,750 cells per cu.m.m.—84% of these were polymorphonuclears. There were no eosinophils or pecularities of the blood cells that might have been suggestive or helpful in differentiating this condition from others. Indeed all symptoms were so mild that had there been no conscious curiosity to guide the collection of clinical data this "cotton fever" might have been overlooked or its existence even denied.

We have been unable to find anything suggestive of cotton fever among those who pick cotton in the fields. It would seem reasonable to suppose that such a condition would be rare under these circumstances since there is a very limited amount of tearing of the cotton fibers. Only a small amount of dust is created and space is not confined to allow for its concentration.

This observation also holds true for cotton compresses and warehouses. There is comparatively little dust in these businesses. (Although one compress foreman who had spent some time in cotton seed oil mills told us that he occasionally found a new man who got cotton fever "just like the oil mills have").

The textile mills know this condition as a "cotton cold" or "card room fever." It is an almost universal experience among new employees in the carding and picking operations. Although an occasional worker may have a chill in the beginning, chills are extremely uncommon in card rooms.

There is a real question in our minds whether the condition in our card rooms is identical to that reported so extensively in the English medical literature. We were unable to get any indication that would suggest that any symptoms of new or old employees were more marked on Monday than on any other day. This would seem to be one of the most characteristic and identifying features of the English condition.

On the contrary, in our card rooms the illness starts with a slight fever together with symptoms of an infection of the nasal sinuses. Hence the name "cotton cold." An occasional case may have a nose bleed. A cough develops. If the cough is sufficiently severe, it may lead to vomiting (as children do with whooping cough). Nausea is infrequent. This process lasts from two to six weeks.

Apparently because work of this type in

textile mills is not seasonal, recurrences of cotton colds are not common. This condition is seldom found among spinners or weavers.

We have been unable to find any card room workers who admit having a persistent cough or shortness of breath. This in itself has seemed worthy of note since in our previous investigations more workers have been found with complaints referable to the subject under inquiry than we have been able to find any justification for.

The more severe form of cotton fever starting off with a chill is frequently found in mattress factories and industries where cotton linters are used in the upholstering of furniture.

The whole issue of acute occupational illness among those employed in the cotton industry has been confused by the many names given to this condition. Four descriptive names have been used in this report—there are a number of others (Monday fever, heckling fever, etc.) found in European medical reports. The very fact that so many names are in common usage testifies to the almost universal experience of this illness in the cotton business. The names may differ, but not the fact of acute illness.

It is probably unfair to refer to the condition as "cotton fever" also, since there is an occupational illness among new employees exposed to high concentrates of grain dusts that is at least clinically indistinguishable from the illness under discusson.

The management of every cotton industry that has been contacted has expressed a belief that "there are some people who can't take this type of work." An inquiry into this belief by a detailed investigation of a number of such cases is the basis for work to be published later. Probably because labor has been both cheap and plentiful in the cotton business in the past, little effort has been made to get any detailed understanding of many employee health problems.

A big factor in labor turnover is the belief of many workers that permanent employment in an atmosphere of cotton dust is bound to result in early death. Many workers bring statements from their physicians requesting a transfer to some other kind of job. It seems to us that a clear and simple explanation of cotton fever or cotton colds given to the employees before they start to work would be extremely helpful. They are bound to find out about it anyway. Discussions of this condition are inescapable among employees — like sex in schools. Therefore, it would seem that industrial management would be well advised to assume the initiative in these discussions. Their workers would then be more disposed to accept management's appraisal of any subsequent health hazards as being complete and unbiased.

LABORATORY INVESTIGATIONS

Neal, Schneiter and Caminita[1] described outbreaks of acute illnesses that occurred among employees in government mattress making projects. The clinical course of their cases seemed identical to our own "dust chills" and "cotton fever." They reported great concentrations of bacteria growing within the cotton fibers of the material used in these mattress making projects. These bacteria were identified as **aerobacter cloacae.** They were able to reproduce the illness both in laboratory animals and human beings by exposing them to pure cultures of these organisms.

We decided to find out whether these bacteria were present with any regularity in the cotton industry in Mississippi. Therefore, samples were collected from bales, card rooms, first and second cut linters, cotton seed and dust from the rafters of textile mills, gins and seed houses. Bacteria were grown from these samples in our own laboratory on beef infusion agar and transferred to standard methods milk agar. These cultures were sent to the laboratory of Neal[1], Schneiter and Caminita for identification.

Two of our card room samples had been dyed before being processed in the carding machines. These samples showed none of the organisms in question, but all the other samples were reported as containing organisms identical to the various strains that had produced the illness they had described.

This would indicate at least that their bacteria were not confined to low grade stained and "bolly" cotton as they originally suggested. Some of our samples were collected from the best long staple cotton available locally.

Finding these bacteria in cotton industries throughout the state where cotton fever is quite common adds support to the belief that **aerobacter cloacae** is the causative organism in this illness.

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1. Neal, P. A.,; Schneiter, R.; Caminita, B. H.: Jr. American Med. Assoc. 119 pp. 1074-1082. 1942.

The fact that bacterial counts from our cotton were by no means as high as those reported in Neal, Schneiter and Caminita's study is in line with our theory that only the high bacterial concentrations are associated with chills, vomiting, etc.

CONCLUSIONS

1. Cotton fever is an occupational disease common to almost every new employee working with untreated cotton in an enclosed space.

2. The severity of the symptoms depends upon the quality of the cotton and the concentration of dust from it.

3. Immunity is usually developed by a worker for a given working environment.

4. Subsequent attacks may occur (a) on protracted absence from a given job, or (b) on being shifted to dustier work, or (c) on being exposed to much lower grades of cotton.

The Value of the Slit-Lamp in Eye Examinations*

EDLEY H. JONES, M.D., F. A. C. S.
Vicksburg, Miss.

GULLSTRAND, in 1911, presented the first model of the "slit-lamp" before a group in Heidelberg. Measured by present day standards, it was a crude model but the principle was sound and it has today been developed into a highly-perfected, precision instrument. The difficulty of adequate illumination has been overcome and instruments now on the market possess a range of magnification of 8X to 103X. All the earlier models were made in Germany and Switzerland; but excellent, and even superior, instruments are now manufactured in this country.

Students of advanced ophthalmology consider it an indispensable diagnostic instrument. Some authors thought the term slit-lamp inadequate and awkward and the term bimicroscopy has been adopted. However, by common usage, the term slit-lamp persists and will probably continue to be used.

Barkan, Kronfeld and others have combined the use of the slit-lamp and contact lens to study the angle of the anterior chamber. By this improved technique (gonioscopy) investigators are learning more about glaucoma. Barkan has stated that by this method he is able, in selected cases, to predict the development of glaucoma before the tension is increased. Further, he has devised an operation wherein he opens the anterior chamber and blocked trabeculae, under direct vision, by this method.

To ascertain how many men in Mississippi were interested in the use of the slit-lamp, I sent out a questionnaire, asking these two questions:

(1) Do you have a slit-lamp?

(2) What is your opinion of its value?

Fifteen replies were received. The first question was answered in the affirmative by five, in the negative by ten. Of the ten negative replies, four made no comment; the other six expressed the opinion that it is a valuable instrument and two plan to purchase one when the war is over. The five men who have and use one agreed that it is a most valuable instrument, one indicating that he considers it indispensable.

Last fall, at the Academy, I had the pleasure of taking a course in the use of the slit-lamp which was presented by Dr. Harvey E. Thorpe and his associates. It was an excellent course, beautifully illustrated with lantern slides, kodachromes and microphotographs. Through the courtesy of Dr. Thorpe, I am privileged to show you a few of these slides which will illustrate, more than words could, the value of the use of the slit-lamp.

(slides)

DISCUSSION

Willis F. Cotten, M.D. (McComb)—The subject presented by Dr. Jones, "The Value of the Slit Lamp in Eye Examinations," is worthy of very careful consideration by every ophthalmologist. It seems generally agreed that biomicroscopy should be considered a part of every eye examination along with the ophthalmoscope and the trial case. With such an aid, much very valuable diagnostic information may be obtained. For one who is doing industrial ophthalmology, biomicroscopy is especially valuable in locating foreign bodies either in the cornea, conjunctiva, vitreous, iris, or lens. Then there is the satisfaction of feeling certain you have or have not removed all of the foreign body. It is also very useful in studying corneal ulcers and corneal vascularization. Normally, the aqueous is not visible, but in early acute iritis, there is an aqueous beam due to an increase of albumin. Then later, when the disease has progressed, in this beam will be seen cells. The cells near the cornea will be seen going down while the cells near the iris will be seen going up, showing very clearly that there is movement in the aqueous.

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*Presented before the Section on Eye, Ear, Nose and Throat, Mississippi State Medical Association, Jackson, Miss., May 9, 1944.

In the advanced cases this circulation ceases and when improvement of the iritis begins, there will often be a return of the thermal circulation noted before other signs of improvement are seen.

The iris seems the easiest of all the parts of the eye to examine, especially can one see detail in the blue or gray ones. Biomicroscopy also is useful in diagnosing early changes of the crystalline lens, for almost all of the lens is visible by this method.

May I take this opportunity of thanking Dr. Jones for bringing to our society a very valuable aid in the study and diagnosis of certain eye lesions.

Dr. A. G. Wilde (Jackson)—Of the various methods employed in the examination of the eyes, oblique illumination is probably the most useful, and certainly the most frequently employed. It is advisable that all such examinations proceed in an orderly and routine manner, otherwise something of importance may be overlooked.

If the acuity of vision is to be determined, it should be done before any form of eye illumination, otherwise the resulting after-image will interfere with the patient's clear definition. This having been disposed of, we can proceed with more accurate objective findings.

I have always maintained that in ophthalmology we have a higher average of accurate diagnoses than in most branches of medicine. This is not because those doing eye work are more competent or better trained than those following other lines, but to two other factors. The first is that the organ with which we deal is open to complete inspection. The second is that we have at our disposal certain aids that may be termed "instruments of precision." The three most important are the ophthalmoscope, the retinoscope, and the slit-lamp.

The last is but an elaboration of focal illumination, whereby the light is intensified and under control, the means of inspection provides great magnification of the structure in question, and the patient is so held as to facilitate that combination. Nowhere else is it possible thus to make a microscopic examination of living tissue, not only of its surface and transparent sections, but certain stains can be applied to bring out more clearly the details of the structures under discussion.

This combination of the binocular microscope and intense focal illumination opened a new world in ophthalmology, almost as great as when in 1851 the ophthalmoscope was introduced by Helmholtz. While the slit-lamp can show the posterior portions of the vitreous with the aid of a flat contact glass, it is more readily adapted to the anterior segment.

I have used the two better known forms, the Zeiss and the Bausch & Lomb for the past twenty-three years, and I would feel quite handicapped without its aid in the examination of the cases for which it is indicated. Its use is not necessary as a routine in every condition that presents itself, unless one desires to make such studies for academic purposes.

With it we find details not only of anatomy heretofore unsuspected, but the minutia and especially the earliest stages of disease processes. This last is especially vital in three conditions: 1) supposed perforation of the globe, 2) early iritis of whatever type, 3) impending sympathetic ophthalmia

As the question of liability is looming larger before us each day, embracing not only those injured, but those possibly injured, and especially those desirous of appearing injured, it behooves us to be always alert, and to call upon every aid that will enable us to arrive at a just estimate of the situation. Here the slit-lamp is indispensable, combined with a detailed record made at the time.

Anyone presuming to appear at court to give expert testimony regarding any debatable liability case, and who fails to have his testimony fortified by slit-lamp evidence, lays his conclusions open to discredit as incomplete.

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OUR FELIX

The September issue of the *Mississippi Doctor* is dedicated to our state health officer, Dr. Felix J. Underwood, whose entire disposition since he became the public health leader of the state has been thoughtfulness, consideration of and coöperation with the members of the medical profession of the state. Besides the many high positions he has held in organized medicine, he has often been medical orator for state medical associations, this honor coming to him last June from the Louisiana State Medical Association. Fully esteemed by the profession at home and throughout the country, he is also welcomed in Canada and Mexico where he has been invited to appear on their programs in national and international meetings. He is the trusted adviser and friend of lay as well as professional groups.

Dr. Underwood will deliver a scientific and good-will address in the early part of November at Toronto, Canada, before the annual session of the Canadian National Public Health Association. He knows the health authorities of every province of Canada as well as he knows the federal and state health authorities of the United States. He is a great admirer of the Canadians and they like him and trust him. His presidency of the State and Provincial Health Authorities of North America included Canada. Dr. Jack Phair of Canada served with him as vice-president. Doctor Phair and Doctor Underwood are Jack and Felix to each other. Jack will welcome Felix to Canada at Toronto next November.

Felix has been president of the Southern Branch of the American Public Health Association and is president of the American Public Health Association this year. He will preside over the annual meeting in New York City, October 2-5. His Canadian visit and address will come after he retires from the presidency of the National Health Association of the United States.

We are proud that our health officer is held in universal esteem by physicians and public health administrators. It is doubtful if there is another man in the nation who knows and understands so well the viewpoint of both the practitioner and the health officer, understands where the province of one should end and the other begin. While he has grown big in public health, he has remained a true and ardent friend of the practitioner of medicine, never losing the common touch with the masses of the people of his state. Here's to him! May he have many more years to serve the profession and the people of our commonwealth and country.

§

Dr. Felix J. Underwood, now president of the American Public Health Association, still holds his membership in the Northeast Mississippi Thirteen Counties Medical Society. Dr. Underwood has held many honors at the hands of his fellow doctors in his local, state, southern, and national associations. He was secretary of the Thirteen Counties group for a long while. In his home county of Monroe he still owns a little farm which he purchased during those first years of practice riding on horseback. Dr. G. S. Bryan of Amory discovered the young man, advised him and guided his footsteps through his early days of general practice and later urged him to consider public health for his life's work. Dr. Bryan is duly proud of his protegé. At the last quarterly meeting of the Thirteen Counties, September 12, Dr. Underwood presided at the banquet. It was a fine meeting. The Underwood and Bryan spirit prevailed. The doctors rejoiced with him in bringing honor to his home society as well as to the state and to the South. It was easy to see that the mind of the society was unanimous in thinking that the next step for Underwood should be the presidency of the American Medical Association, not just because he is worthy of the honor, but because of the outstanding service he is prepared to do the nation in this capacity.

§

HAVE WE THE VISION?

The chief aim of the medical profession with the aid of government, church and philanthropy should be to build health assets—mental, moral and physical—because in the health of the people lies the strength of the nation.

We can trace the thread of scientific medicine from Hippocrates to the present time, but along its length there are found very thin and fragile sections. In the last hundred years the science of medicine has swept down the valleys of ignorance, trial, and chance as a mighty torrent, adding decades to our life's span through prevention and cure.

England, Germany, France, and Italy were the meccas for medical education for many years, but when politics took hold of them and gave them socialized medicine in a large measure, their light began to fail. In the immediate future and for many years to come, the United States will be the world center for medical education. We must not only hold and continue to improve standards, but we must practice the good neighbor policy of sharing with the world our democratic medicine.

Before Congress now is a very dangerous bill (the Wagner bill) that would in substance take twelve per cent of the income of eighty-five per cent of our people while one man in Washington is empowered to tell the people whom they might have for a doctor. This political medical system we must not have. Democracy should live most abundantly in the medical profession. The brain of the scientist must be left free to follow the truth until it is known in all of its relations to man and applied to the length and to the volume of human living. It is gratifying to know that our Mississippi representatives in Congress in both houses are opposed to this bill.

We believe the medical profession has been most unselfish, although many of its members are not awake to the importance of total medical service to all the people, and that the first responsibility is theirs in relating medical service to every phase of human life and building human personality in keeping with the admonition of the Man of Galilee. We must go out for total medical service to all the people, and let democracy have its way in and out of the profession.

The United States now has a shortage of doctors and generally speaking it has a poor system of obtaining proper distribution. The very finest medical service known is right now being administered on the battle fronts, in the jungles, and on the beachheads, but many leaders in medicine think this type of medicial service impracticable for the people out on the civil firing lines, up on Vinegar Bend, and down on Yellow Rabbit. But it can and must come to all the people. However, there is an immediate shortage of doctors which must be faced. We doubt if Selective Service is acting wisely in depleting our medical schools.

Our civil population should have the advantage of blood plasma as well as the men on the firing lines. After the war, our machine age will multiply emergencies in small towns and rural communities.

In 1942, Russia, while doing a big part as a major ally in this war, enrolled in her medical schools 120,000 young students. Here in America, we continue to reduce our number toward the zero mark. When the rebound came after World War I, in 1922 the United States graduated only 2,520 young doctors. After World War II, the number will probably go lower.

Before World War II, the United States averaged one doctor to 800 population, one to four or five hundred in the cities, and one to four to five thousand in many country communities. At present, we have one doctor in the armed forces to every two hundred soldiers, one to thirteen hundred in the nation at large, and one to twenty-five hundred in Mississippi. Mississippi has sixty-three men left in the state under thirty-five years of age, fifty-four per cent past sixty years of age, and many of the "active men" are past seventy and even eighty years. We have about twenty per cent fewer doctors than we had fifty years ago with a population more than doubled—per population only one-fourth as many docotors as we had a half century ago.

For forty-one years Mississippi has had at the University of Mississippi one of the very best two-year medical schools. Only a few years ago there were ten such schools in the United States, and all but three have gone to four-year schools, or plan to do so, or they are paying $1,000 per year per student as a subsidy to a medical school outside their state. Because of the difficulty of getting into another school for the last two years, less than one to the county of our boys is making application to go to Ole Miss. Only one out of three who go to Ole Miss finds his way back to Mississippi to practice. Our state does not qualify for a single internship. The population of our state is largely rural and the income per family is small, so when our boys are taught out of the state in terms of large expensive hospitals and equipment, interns, nurses, orderlies, and charts, they know not how to practice in the country and small town; neither do they have the inclination. They have been enamored of the bright lights; they have caught the vision of fancy specialist fees, short office hours in the forenoon, golfing by afternoon, and partying at night. Back home the road looks hard, and it is. The inducement to return is small.

But the hope of world democracy, religious freedom, and economical security is in the children of our rural communities and small towns of the South. This Anglo-Saxon blood has in it the world‘s greatest leadership. These people, our people, must be provided the best in medicine even if it takes a subsidy from both national and state governments for hospitals and even doctors. Better this than to have the initiative of democratic medicine choked by the proposed Wagner plan that would fetter eighty-five per cent of our people, and make political hirelings of the doctors.

The community hospital has been, is, and will continue to be the foundation for proper distribution of doctors. It constitutes an expedient means of delivering the best in medicine to the very sick patient at less cost. People are becoming more hospital-minded. To take care of this in hospitals in very recent years, it is estimated that it would take a new 727-bed hospital every day in the year. At least eighty-five per cent of our sickness can just as well be treated in the small hospital by the home doctor. In many cases, as acute appendicitis, Dr. Time is the most successful doctor. It is better to have an operation for acute appendicitis in a six-bed hospital within six hours of the onset by a general country surgeon than to have it in the biggest hospital in the world by a Mayo three days later.

With a central university hospital connected with a four-year medical school, affiliated with all of our community hospitals over the state, the State Board of Health, the hospitals for the mentally sick and the tubercular, we can have a hospital system that will furnish all the clinical material needed by any medical school, a system second to none for training interns and nurses; for encouraging a senior consultation that will raise the standard of efficiency of the practitioner; for enabling the medical school to deliver medical service to every nook and corner of the state; and for providing a state-wide prepayment insurance plan. Finally, the ultimate goal of building health assets into efficient citizenship will be realized. Of course, a medical school will cost something, about five million perhaps to start it off and a half to one and a half to keep it going in the right way. But if we can add five million to education and seven to old age assistance, why can we not furnish this for health assets which constitute the nation's greatest source of strength?

Mississippi has everything it needs for the most adequately functioning medical school in the United States—save perhaps the vision and courage to go forward. We are fully convinced that a majority of the doctors in our state will stress the need of a four-year medical school. The House of Delegates of the Mississippi Medical Association went on record in May favoring it.

It is time to divorce politics from medical service in our state and to go forward in providing doctors for the people of our state and help to bless the world with democratic medicine.

W. H. A.

POSTWAR OUTLOOK FOR RETURNING MEDICAL OFFICERS

It is noted that the Council of the American Medical Association made quite a study of postwar educational facilities which might be made available to returning medical officers. I have been informed that this study is being continued, based on what these men desire after the war. Of course, all medical officers will not be released at the same time and there will be a gradual demobilization of all men. At the present time, there are some men being relieved of duty in the armed forces. Many are taking refresher courses and many are going directly into practice.

The "G. I. Bill of Rights", Public Law 346 - 78th Congress, an Act to provide Federal government aid for the readjustment in civilian life of returning World War II veterans, is referred to as the "Servicemen's Readjustment Act of 1944". Title II, Chapter IV - Education of Veterans states:

> "Any person who served in the active military or naval service on or before September 16, 1940, and prior to the termination of the present war, and who shall have been discharged or released therefrom under conditions other than dishonorable, and whose education or training was impeded, delayed, interrupted, or interfered with by reason of his entrance into the service, or who desires a refresher or retaining course and who either shall have served ninety days or more, exclusive of education or training under the Army Specialized Training Program or the Navy College Training Program, which course was a continuation of his civilian course and was pursued to completion, or as a cadet or midshipman at one of the service academies, or shall have been discharged or released from active service by reason of an actual service incurred injury or disability, shall be eligible for and entitled to receive education or training under this part."

Now is the time for the medical profession to plan through its schools, hospitals, and clinics for the readjustment back to civilian life of the discharged medical officer. Some of these men and women are coming back now. The organized medical profession should prepare to assist in the retraining and reëducation to civilian life of these physicians who have given up much to do their bit in this great struggle for peace. Readjustment will take time. Mississippi's medical profession was high in the average age at the beginning of this conflict. Many of the younger men have left the state for the colors—some 250. These are the men that the public will depend upon for safe, sane, and conservative advice in the future years. They should be aided in every way to readjust themselves (by postgraduate courses, short refresher courses and other means) upon entrance into civilian work again. The Army and Navy must accept some responsibility in this matter also at the end of this war.

L. W. L.

Book Reviews

THE PRINCIPLES AND PRACTICE OF WAR SURGERY, by J. Trueta, M.D. Acting Surgeon-in-Charge, Accident Service, Radcliffe Infirmary, Oxford, England. Introduction by Owen H. Wangensteen, M.D., Minneapolis, Minn. 441 pp., indexed, 144 text illustrations. Published by C. V. Mosby Company, St. Louis, Price $7.00.

The Principles and Practice of War Surgery is written by a British surgeon whose special technique has been put into practice at the Wingfield-Morris Orthopaedic Hospital in Oxford for three years. His reports of thousands of cases with an amazingly small mortality are based on a five-point program which he says is more important than the surgeon's skill. Much of his experience was gained in the recent War in Spain, followed soon by World War I with its exigencies for wound treatment. His points are: 1) Prompt surgical treatment; 2) cleansing of the wound; 3) excision of the wound; 4) provision of drainage; 5) immobilization in a plaster-of-Paris cast. He urges speed in the first, advocates soap and water as an excellent antiseptic, and emphasizes proper excision as the keystone of the whole treatment. He advises dry gauze to provide drainage in a recent wound, and his final point is the plaster-of-Paris cast, moulding it well over the wound to establish good contact with the drainage gauze for absorption and to maintain a gentle pressure that the process of epithelization may be assisted. Success hinges on the third, excision. His discussion on this critical point is detailed.

Trueta's *War Surgery* will be welcomed by

American surgeons for general civil practice. His program is so well explained and his results have been so good, the general surgeon will find this book highly valuable.

Two divisions, the pathology of wounds, and the essentials of war surgery cover his methods of general care and entire technique —all of which is timely for highway treatment and industrial accidents seen by the general practitioner in every community of our state.

MINOR SURGERY, edited by Humphry Rolleston and Alan Moncrieff, 174 pp., published by Philosophical Library, New York. Price, $5.00.

A book of scarcely two hundred pages could not cover the subject more concisely than this little book on the surgery usually done in the office of the practitioner. The chief reason the text is so compact is that an authority on the various minor surgical requirements, eighteen in all, has written a chapter on his field. Frequently illustrations are used to clarify a technique discussed. The authors are eminent in British surgery.

The divisions are as follows: Minor Wounds by Surgeon Rear-Admiral Cecil P. G. Wakeley; Sprains by G. R. Girdlestone; The Feet by H. Lyon Campbell Wood; The Hand by Norman C. Lake; The Mouth by R. L. Newell; The Nose and Throat by E. D. D. Davis; The Ear by C. P. Wilson ;The Eye by J. S. Arkle; Bursae and Ganglia by H. Jackson Burrows; Some Benign Tumors and Cysts by T. Twistington Higgins; Skin Infections by A. Rendle Short; The Rectum by W. B. Gabriel; The Genito-Urinary System by Clifford Morson; Hernia by Ralph Coyte; Varicose Veins by Reginald T. Payne; Gynecology by Douglas McLeod; Childhood by H. W. S. Wright; and Anesthesia by C. Langton Hewer.

SAFE CONVOY, the Expectant Mother's Handbook, by William J. Carrington, M.D., F.A.C.S: Attending Gynecologist Atlantic City Hospital, Atlantic City, N. J. Published by J. B. Lippincott Co., Philadelphia. Price $2.50.

This handbook combines something of the subtle wit of *Bet It's a Boy* and the kindly advice of an expectant mother's physician throughout several important months. Dr. Carrington wrote the book to help dispel some of the bogies of pregnancy, to make the voyage one of happy dependence on understanding, the fears of unenlightenment dispelled. His own clever anecdotes sprinkled along with the guiding advice and instruction to the prospective parents makes it an excellent little handbook to place in their hands. And at no time has the overworked physician appreciated coöperation from his patients more. He might find the little book a refreshing help to both his patient and himself.

Safe Convoy presents all the essentials of pregnancy, birth and postpartum care, including the latest information about techniques, delivery and exercises after the baby comes.

Deaths

DR. VIRGIL A. LEA

Final rites for Dr. Virgil A. Lea, 63-year-old Gloster physician, who died early Sunday morning as a result of injuries sustained in an automobile accident, were held Aug. 8 at Gloster.

Relatives said that Dr. and Mrs. Lea, and their grandson, Michael Fogarty, were returning from New Orleans, when apparently the physician lost control of the wheel in a heavy rainstorm and skidded into a bank. Mrs. Lea suffered severe head and leg lacerations and their grandson received a deep cut across his foot.

The wrecked car was found by a group of Camp Van Dorn soldiers, who carried them to a hospital for medical treatment.

Survivors include his wife, two sons, Virgil A. Lea, Jr., with the U. S. Navy in the Pacific, James Lea, with the U. S. Marines at Norfolk, two daughters, Mrs. Leland Sartin, Little Rock, Ark., Mrs. Shalon Fogarty, New Orleans, La.; four brothers, F. M. Lea of Biloxi and H. M. Lea, C. M. Lea, and C. R. Lea, all of Magnolia; and three sisters, Mrs. Sebe Reynolds, Jackson; Mrs. Lillian McLeod of Pensacola, Fla., and Miss Alva Lea of Magnolia.

Dr. Lea was a deacon in the Baptist church and served as a captain in World War I. He had been practicing medicine in Gloster for 27 years. He was graduated from Tulane University in 1905.

DR. J. S. SHARP

Dr. John Sidney Sharp, one of Grenada's best loved physicians, died at his home August 6. He had practiced medicine in Grenada for about 50 years until his retirement because of illness five months ago. He was 73.

Dr. Sharp was born in Wall Hill, Miss., son of Dr. and Mrs. J. W. Sharp, prominent Mississippi family. He received his Bachelor of Arts degree at the University of Mississippi and his medical degree at Tulane University. In 1905, Dr. Sharp married Miss Daisy Leigh Bransford of Lynchburg, Va. She survives.

Dr. Sharp was active in both civic and religious circles in Grenada. He was a Mason and a Rotarian and a member of Mississippi State Board of Health many years. He was chief surgeon in the area for the Illinois Central Railroad and had been a member of Grenada Clinic since its organization.

He also leaves his son, J. S. Sharp, Jr., of the Army Air Forces, Seattle, Wash., and his daughter, Mrs. Lynn Williams, Grenada; two sisters, Mrs. Andrew Howze, Texarkana, Ark., and Mrs. Bird Sharp, Grenada.

Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—James G. Thompson, Jackson.

Ear, Nose and Throat—Edley Jones, Vicksburg.

Obstetrics and Gynecology—J. F. Lucas, Greenwood.

Orthopedics—Thomas H. Blake, Jackson.

Pathology and Clinical Pathology—John C. Henthorne, Vicksburg.

Pediatrics—Harvey F. Garrison, Jackson.

Public Health—Felix J. Underwood, Jackson.

Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

DERMATOLOGY

Edited by Doctor Herbert Rattner

Archives of Dermatology and Syphilology, Vol. 49, No. 3, P. 200 and 201. March 1944.

SULFATHIAZOLE ERUPTIONS: Sensitivity induced by Local Therapy and Elicited by Oral Medication. Bertram Shaffer, J. W. Lentz and James A. McGuire, J.A.M.A. 123:17 (Sept. 4, 1943).

The authors report four cases of acute dermatitis produced by the ingestion of sulfathiazole. A feature of this group of cases is the fact that local application of sulfathiazole gives rise to generalized sensitization in the sense that subsequent administration of the drug may precipitate a sulfathiazole dermatitis. Again, this eruption tends to mimic the condition for which the patient was originally treated, and also it begins and is more pronounced at the sites at which sulfathiazole was applied locally. Patch tests elicit negative reactions in the disseminate eruptions, but passive transfer tests performed with the Prausnitz-Kustner technic gave positive reactions for sulfathiazole and gave positive delayed tuberculin type reactions as well as the usual early wheal reactions.

* * * *

DHOBIE MARK DERMATITIS. C. S. Livingood, A. M. Rogers and Thomas Fitz-Hugh, Jr., J. A.M.A., 23:23 (Sept. 4) 1943.

When the personnel of the Twentieth General Hospital was first exposed to dhobie-laundered clothes, 14 per cent of the organization acquired a localized contact dermatitis. The causative agent was the marking fluid used by members of the dhobie caste throughout India. It is obtained from the nut of the ral, or bella gutti, tree. The dermatitis first appeared on that part of the skin in contact with the dhobie mark. The dhobie mark is the probable cause of most cutaneous diseases acquired from wearing dhobie-laundered clothes. It is unlikely that cutaneous fungus infections are transmitted by clothing washed by dhobies, and therefore use of the term "dhobie itch" as a synonym for tinea cruris and dermatophytosis should be discontinued.

* * * *

DERMATITIS FROM SEMECARPU: ANACARDIUM. (Bhilawahol of the Marking Nut). Spread by Mail. N. R. Goldsmith, J.A.M.A. 123:27 (Sept. 4) 1943.

A bottle containing bhilawanol oil, shipped from India in a sealed mail pouch, partially opened and contaminated various pieces of mail. Sixteen of a force of carriers and clerks numbering approximately fifty who handled this mail acquired a vesicular eruption on the exposed parts within twenty-four hours. Patients treated with dressings wet with solution of boric acid or solution of aluminum acetate (Burow's solution) diluted 1:20 healed within ten days.

* * * *

PROTECTION IN RADIOLOGY: AN EXHIBIT. Edith H. Quimby and John Pool, Radiology 41: 272 (Sept.) 1943.

The authors have published photographs of original charts of an exhibit on protection in radiology. Unfortunately too few dermatologists are familiar with the most modern standards of protection against roentgen and gamma rays. The necessity for protection of the patient, the physician, the technician and the neighbors is briefly and accurately presented in pictures and words. The dangers of over-irradiation are enumerated and graphically presented. Also useful are the data on the degree of protection offered by distance, various thicknesses of lead and their equivalents in iron, barium plaster, concrete and red brick. Tests to determine whether or not protection against radiation is sufficient are enumerated and described. It is recommended that every dermatologist who uses roentgen rays and radium spend a few minutes to read this excellent presentation.

PEDIATRICS

Studies on the Minimal Effective Dose of a Water-Soluble Vitamin K Substitute in the Prevention of Hypoprothrombinemia in the Newborn Infant — Hardwicke, Sara Hooker, *Journal of Pediatrics,* 24:259, (March) 1944.

"A total of 87 breast-fed newborn babies in the Rochester Municipal Hospital nursery were studied between May 11, 1942, and September 10, 1942 in an attempt to establish an appropriate minimal effective daily dose of synkayvite (tetra sodium 2-methyl-1, 4-naphthohydroquinone diphosphoric acid .ester) They were divided into six groups . . . Those in the first group, O, were to receive no vitamin K; those in Group A were to receive 0.5 mg. of synkayvite per day; those in Group B, 0.05 mg.; those in Group C, 0.005 mg.; those in Group D, 0.0005 mg.; and those in Group E, 0.00005 mg. per day . . . The synkayvite was prepared by serial dilution with a 2 cc. syringe and cool, previously boiled water, and fresh solutions were prepared every other morning. The solutions were made from the contents of the ampoules designed for intravenous use. Accordingly, dilutions of 0.5 mg., 0.05 mg., and 0.0005 mg. per cc. were prepared . . . The substance was given orally.

"In group A, 11 babies were followed through 140 hours; in Group B, 12 babies; in Group C, 11 babies; in Group D, 14 babies; in Group E, 11 babies were followed through 140 hours and one through 130 hours; in Group O, 12 babies were followed through 140 hours.

"In Group A all prothrombin times were below 40 seconds; in Group B, all were below 40 with one exception . . . In Group C all prothrombin times were below 40 seconds except for one baby, whose was 45 seconds 10 hours after birth. In Group D, where the daily dose was only approximately 0.0005 mg., more variation was apparent. There was one peak to almost 60 seconds at about 60 hours, and at 80 hours plus, there were two values of over 40 seconds. In Group E, where the daily dose was 0.00005 mg., there was no apparent difference in the prothrombin times from those found for the infants in Group O, to whom no vitamin K was given.

"The following conclusions are believed justified:

"1. The minimal effective daily dose of this substance lies somewhere between 0.005 and 0.0005 mg.

"2. A minimal dose of 0.0005 mg. given daily would probably prevent the development of hemorrhagic disease with the exception of the few cases that occur within the first 24 hours.

"3. Approximately 1,25 mg. of the test substance is apparently effective in lowering an excessively high prothrombin time to a normal range and maintaining it in this range without further medication.

"4. The administration of seconal, nembutal, and sodium amytal to the mothers of the babies studied in this series had no demonstrable effect in prolonging the prothrombin time of the babies.

"5. Synkayvite, given in the doses and concentrations mentioned, does not produce vomiting in the newborn infant."

COMMENT

This article is interesting from more than one standpoint. In the first instance it is right valuable to know that the administration of barbiturates have little or no influence in causing the prothrombin to be increased. Therefore, we have no fear from that standpoint in the administration of these drugs prior to the birth of the baby. However, we do know that such drugs in many instances have caused some difficulty in resuscitating the baby, therefore, we would be inclined to urge the physician to give as little of these drugs as possible.

There is no objection to giving more than one dose of vitamin K to the infant. It is frequently our practice to give three or more doses of vitamin K to infants we have reason to suspect that there is a probability that the baby may have or is in immediate danger of having cerebral hemorrhage.

It is an interesting fact that no wars of significance have ever been waged over medical problems. People have fought over about every other problem imaginable. Wars over religion, over commerce, trade and industry, over boundaries, over races and sects, over royal and legal decrees, over social and economic questions but never over medicine. In fact, medicine has been throughout the centuries one of the great unifying agencies to bring the peoples of the earth together.

—David J. Davis, M.D., Diplomate, Jan. 1944

State Board of Health

Felix J. Underwood, M. D.

THE CONTRIBUTION OF PUBLIC HEALTH TO MISSISSIPPI'S PROGRESS

by

E. Louise Williams, Librarian

Perhaps no one other factor has contributed more to Mississippi's development and progress than its public health program. Diseases which once hampered economic and social development have been eliminated or brought under control in most sections and steady progress is being made in the remaining areas. Not only disease prevention but health promotion is receiving emphasis, and the people are receiving the benefits of full-time health services in 65 of the state's 82 counties. Other counties have indicated their desire for such service as soon as an adequate number of trained personnel is available to operate the local units. When every county has achieved full-time local health organization, a long-time goal of the State Board of Health will have been realized. It is recognized that only through the local unit can there be insured to every individual in every home the full benefits of modern scientific knowledge in the protection of health.

The first full-time county health officer in Mississippi was employed by Harrison County in 1917. However, an earlier stimulus to rural health development came in 1910 when a grant was received from the Rockefeller Foundation for an intensive campaign against hookworm disease. Thousands of children were treated and cured of the disease, sanitary conditions were greatly improved and the population became impressed with the wisdom of preventing disease through proper public health measures. Following the campaign to eradicate hookworm, there was begun in 1914 with the assistance of the United States Public Health Service, a program to reduce typhoid fever. The results proved gratifying, the interest and coöperation of the public steadily increased, and as a consequence the functional divisions of the State Board of Health were gradually established and the health personnel increased in both state and local health services.

In 1924 a milestone was passed when the Legislature enacted a law protecting the State Board of Health from any political interference in the execution of its important duties. In that same year Dr. Felix J. Underwood was made Mississippi's first full-time state health officer after serving several years as director of the Bureau of Child Hygiene. The achievements which followed soon gained for the State Board of Health wide prominence and it was cited as a good example of efficient public health organization and administration.

All too familiar is the work which has been done in eradicating the communicable diseases or in reducing their incidence to a minimum. As new knowledge has unfolded in the medical sciences, public health has likewise made headway, developing new and better technics, and expanding its activities to cover more and more of the health needs of the population. So rapid have been the advances that it has increased the need for highly trained personnel, and this need was being met up to the time of the war through post-graduate training special scholarships. More than ever before, emphasis is now being placed on continued training and study in order to make the most effective use of the new knowledge in public health procedures.

Working hand in hand with public health workers have been the ever-faithful members of medical and dental professions, administering the principles of preventive medicine in a manner which exemplifies the great good which may be accomplished through unity of effort and experienced leadership. It was the medical profession which fostered the establishment of the Mississippi State Board of Health back in 1877, when the need for such an organization was so apparent. For their splendid coöperation down through the years is due much of the credit for the state's public health achievements.

Looking to the future, Dr. Underwood stated in a recent address[1], "The postwar period holds promise of many exciting developments in the practice of preventive medicine.

A better knowledge of nutrition will enable the physician to protect the patient against innumerable deficiency diseases. Health education by the physician will be broadened. We shall witness continued progress in chemotherapy, reducing further the incidence of such diseases as syphilis, gonorrhea, meningitis, pneumonia, and other infections. Through the use of the small film x-ray, it is hoped that there will be a more intensive attack on tuberculosis, detecting the disease in its early stages through mass case-finding programs. There will be new emphasis on the prevention of occupational diseases, with preventive industrial medicine coming to the fore. Other specialties too will make way for a larger measure of prevention. Attaining these goals means that more and more of our physicians must be trained in all aspects of preventive medicine. We are undoubtedly on the threshold of a new era in medicine and public health which calls for greater preparation than ever before. Not content with merely eliminating disease, the present goal is a more positive one — the attainment of freedom from disease, maximum physical fitness, and a higher level of health for everyone. To attain health security is one of the first steps in attaining peace security."

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1. Underwood, F. J., "New horizons in preventive medicine." Presented before the Louisiana State Med. Society, New Orleans, La., April 25, 1944.

* * * *

THE POLIOMYELITIS SITUATION IN MISSISSIPPI

Mississippi is having a slight increase in poliomyelitis cases over the normal expectancy. Up to August 20 there had been 62 cases reported according to Dr. A. L. Gray, director of Preventable Disease Control. This compares to an expectancy of approximately 40 cases for the whole year. Of the total cases, 12 had onset prior to June 1 and 50 since June 1.

While we do not expect a large epidemic this year, we are having more than the usual number of cases, which are well scattered over the state. Predictions are hazardous but the past poliomyelitis history of the state together with what is happening this year in other states indicates the likelihood of a sizable epidemic in Mississippi in 1945.

DISEASE INCIDENCE IN MISSISSIPPI, 1942-1943

Typhoid fever showed an increase of 20 per cent, from 149 cases in 1942 to 179 cases in 1943, but remained considerably below the five-year average. Typhus fever increased to a new high of 133 cases in 1943 compared to 67 cases in 1942. Tularemia has maintained a steady increase during the past few years reaching a total of 62 cases in 1943. Undulant fever was reported with the highest frequency in the history of the state in 1943 with 40 cases being reported. Diphtheria showed the lowest incidence in the history of the state with a total of 341 cases, a reduction from 384 cases in 1942. Tuberculosis showed a considerable increase in reported cases over 1942, but this increase was due in great measure to increased case finding activities of county health departments, State Selective Service, armed forces, Veterans Administration, and the diagnostic field unit.

WHOOPING COUGH IMMUNIZATION

The whooping cough immunization program instituted in August, 1942, became well extended in 1943 requiring the purchase and distribution of approximately 18,000 packages of vaccine to health departments and physicians during the year. It is encouraging to see the rapidly increasing demand of private physicians for this product in addition to the increasing number of children being referred to the health department by physicians for this service.

STATISTICS

A new system of morbidity tabulation and analysis was placed in operation in January 1943, through the use of mechanical tabulation and punch cards. This system will be most valuable in providing accurate morbidity records and in securing desired information from them. In tuberculosis reporting it will reduce duplicate counting of a case which in many instances is reported by more than one physician.

VENEREAL DISEASE CONTROL

Venereal disease control continues to be our big job. Throughout 1943 a little under 300 clinics were in operation in the state. There were admitted to these clinics 23,019 cases of syphilis and 6,328 cases of gonorrhea or a total of 29,347 cases. Of the 23,019 cases of syphilis admitted, 2,075 were primary and secondary, 10,094 were early latent, 9,895 were late and late latent, and 955 were congenital. A very high percentage of these cases were registrants, expectant mothers, and contacts to military personnel. Most of the cases of gonorrhea treated were contacts to military personnel. In the clinics there were administered 643,498 doses of arsenicals, 680,249 doses of heavy metals, and 10,000 treatments (weekly) for gonorrhea. To maintain this program we purchased and distributed to health departments and private physicians 56,200 ampoules of distilled water, 19,000 ampoules of .6 gram marpharsen and 15,000 ampoules of .06 gram mapharsen, 85,000 ampoules of .6 gram neoarsphenamine, 14,000 ampoules of .45 gram neoarsphenamine, 55,500 ampoules of 4.5 gram neoarsphenamine, 500,000 sulfathiazole tablets, and 500,240 cc. of bismuth subsalicylate in oil. It is interesting that physicians are requesting increasing quantities of therapeutic agents for syphilis and that most of them are treating their private patients much more adequately than ever before.

The public health treatment centers admitted more than a thousand cases of syphilis and gonorrhea during the year. Most of those admitted were infectious and were sexually promiscuous, making them not only dangerous to the armed forces but to the general public. Intensive treatment methods for both syphilis and gonorrhea are being used. Penicillin became available for sulfa-resistant gonorrhea in these centers and has been used quite successfully.

The personnel of the Division of Preventable Disease Control gave assistance in many counties in performing spinal punctures done during the year and most of these were on registrants who were approaching completion of their treatment in the clinics. These 11,000 spinal punctures in 1943 are in contrast to approximately 150 being done each year in the biennium 1939-1941. It reflects radical improvement in management of clinic patients, since this procedure is necessary in the management of syphilis. This procedure was stimulated tremendously by selective service requirements but is to remain a part of the clinic management of all clinic patients. In 1943, 1,400 patients were found to have positive spinal fluid, showing need for more intensive and prolonged treatment to prevent ultimate symptomatic neurosyphilis, requiring commitment to the Mississippi State Hospital.

NEW BOOKS IN THE LIBRARY

Albee, F. H., *A Surgeon's Fight to Rebuild Men,* New York, E. P. Dutton & Co., 1943.

Babkin, B. P., *Secretory Mechanism of the Digestive Glands,* New York, Paul B. Hoeber, Inc., 1944.

Bell, E. T. *A Text-book of Pathology,* 5th ed., Philadelphia, Lea and Febiger, 1944.

Bierman, William, *Physical Medicine in General Practice,* New York, Paul B. Hoeber, Inc., 1944.

Clinics, *Symposium on Urology,* June 1944, Philadelphia, J. B. Lippincott Co.

Ellis, Havelock, *The Psychology of Sex,* rev. ed., New York, Emerson Books, Inc., 1938.

Folsom, J. K., *The Family and Democratic Society,* New York, John Wiley & Sons, 1943.

Freud, Anna., & Burlingham, D. T., *War and Children,* New York, International University Press, 1943.

Holt, L. E., Jr., *Holt's Care and Feeding of Children* 16th ed., New York, D. Appleton-Century Co., 1943.

Hume, E. E., *Victories of Army Medicine,* Philadelphia, J. B. Lippincott Co., 1943.

Kahn, R. L., *Serology in Syphilis Control,* Baltimore, Williams & Wilkins Co., 1942.

Krantz, J. C., Jr. (ed.), *The Johns Hopkins Formulary and Handbook* Baltimore, John D. Lucas Co., 1942.

Manson-Bahr, Philip, *Synopsis of Tropical Diseases,* Baltimore, Williams & Wilkins Co., 1943.

Medical Clinics of North America, *Symposium on Chemo-physical Diagnosis,* July 1944, Philadelphia, J. B. Lippincott Co.

Mumford, Lewis, *The Condition of Man,* New York, Harcourt, Brace & Co., 1944.

Pullen, R. L., (ed.) *Medical Diagnosis: Applied Physical Diagnosis,* Philadelphia, W. B. Saunders Co., 1944.

Rapaport, David, *Emotions and Memory,* Baltimore, Williams and Wilkins Co., 1942.

Read, G. D., *Childbirth Without Fear,* New York, Harper & Brothers, 1944.

Rivers, T. M., *Virus Diseases,* Ithaca, Cornell University Press, 1943.

Swartz, Mary Rose, *Foundations of Nutrition,* 4th ed., New York, Macmillan Co., 1944.

Rowan, Capt. Thomas T., *Born in Battle,* Philadelphia, John C. Winston, Philadelphia, 1944.

Truslow, Walter, *Body Poise,* Baltimore, Williams & Wilkins Co., 1943.

Zabriskie, Louise, *Mother and Baby Care in Pictures* 2nd ed., Philadelphia, J. B. Lippincott Co., 1941.

Books may be borrowed by physicians for a period of two weeks upon request.

The heavy toll taken by tuberculosis socially and economically for centuries can be reduced to a minor public health problem in one generation and eventually eliminated altogether by putting into practice the knowledge we now have of its epidemiology and treatment. The Modern Attack on Tuberculosis, Chadwick & Pope.

Felix J. Underwood, M.D.

J. W. LIPSCOMB, M.D.
Columbus, Miss.

AN APPRECIATION

For eighteen years I was associated with Dr. Felix J. Underwood, on the State Board Health. Twelve of those years I was president of the board, so I feel that I can speak with one having authority.

An upright man, a modest man, an able man, a generous man is Felix Underwood, sharing honors which come to the Board of Health with the heads of his departments and individual workers. He is a wise man, evidenced by his choosing as his associates the best men and women available in their respective divisions. He is a born executive and diplomat performing the duties of his exacting position with harmony, ease, and dispatch. And he is a kind hearted man, always considerate of the feelings of others.

Felix J. Underwood assumed the responsibilities of executive officer of the Department of Public Health when it was little more than a "name" and by his marked ability zeal, and untiring energy in and out of season, he has elevated it to a position where it stands second to none in the public health work of the United States. His department is pointed to as an example of a clean-cut, ably run branch of the departments necessary to the transaction of the affairs of state—no adverse criticism, no committees to investigate its financial affairs, for when it comes to dollars and cents, he says, as they say in the army, "all present or accounted for" with vouchers or cash on hand to substantiate his reports.

The state of Mississippi owes a debt of gratitude to this man who has so ably conducted his department that it has not only advanced the individual physical standing and condition of the citizens of our great state, but is pointed to as one of the outstanding health departments in the United States and as an example when visitors from foreign countries come to observe and study public health work in our country. Mississippi is one of the first recommended for observation.

This man has done and is doing a most gratifying and helpful piece of work in his line, sacrificing personal ambitions or predilections (he was urged to run for governor, with a good chance of being elected) because he appraises the scope of service of the department of which he is the head as of paramount importance in elevating the moral, physical, and mental status of his fellowman.

Felix J. Underwood is a successful man, who visualized a need and an opportunity to be of service to his fellowman, a man who embraced this need and opportunity, and with farsighted vision devotes his life to its full consummation.

Someone said: "There are but three classes of men, the retrograde, the stationary, and the progressive.

Felix J. Underwood belongs to the progressive branch. I salute him and congratulate the state of Mississippi on having such an efficient public servant.

MEDICAL EXAMINATIONS

The Mississippi State Board of Health will hold medical examinations on October 16 and 17, 1944, in Jackson, Mississippi at the Robert E. Lee Hotel.

Examinations may be taken on the first two years only, as well as on all four years of medicine; (or on the last two years for those who have passed the first two years before this Board).

For application blank and other information address, Dr. R. N. Whitfield, Mississippi State Board of Health, Jackson 113, Miss.

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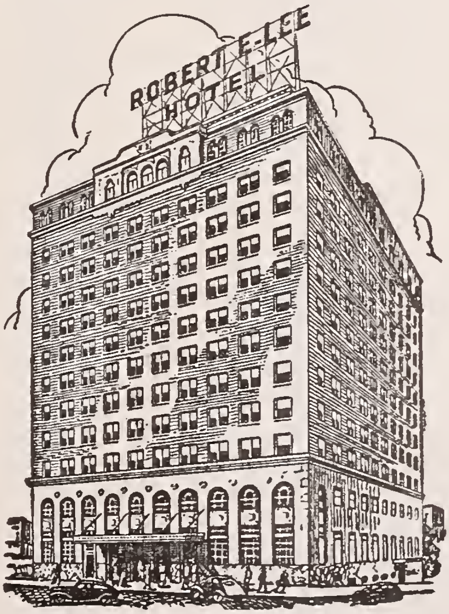

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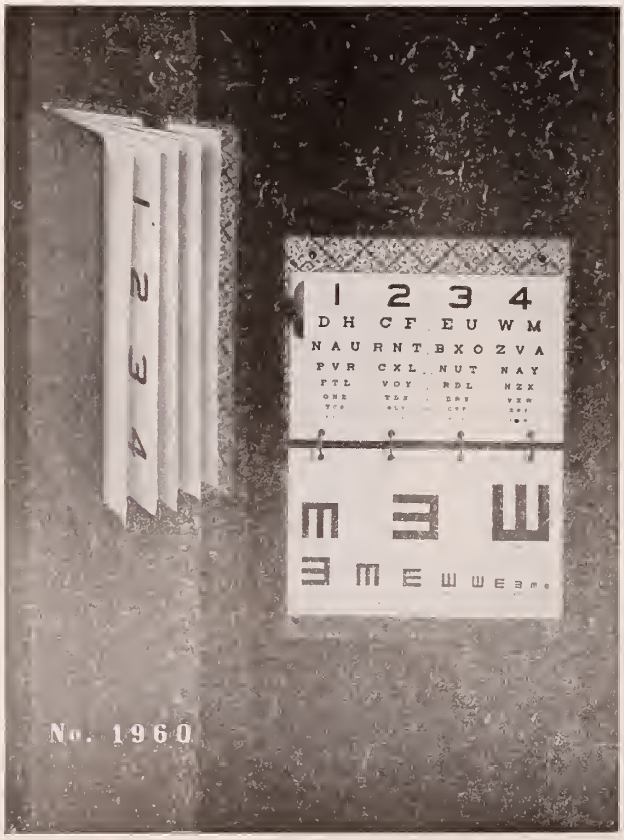

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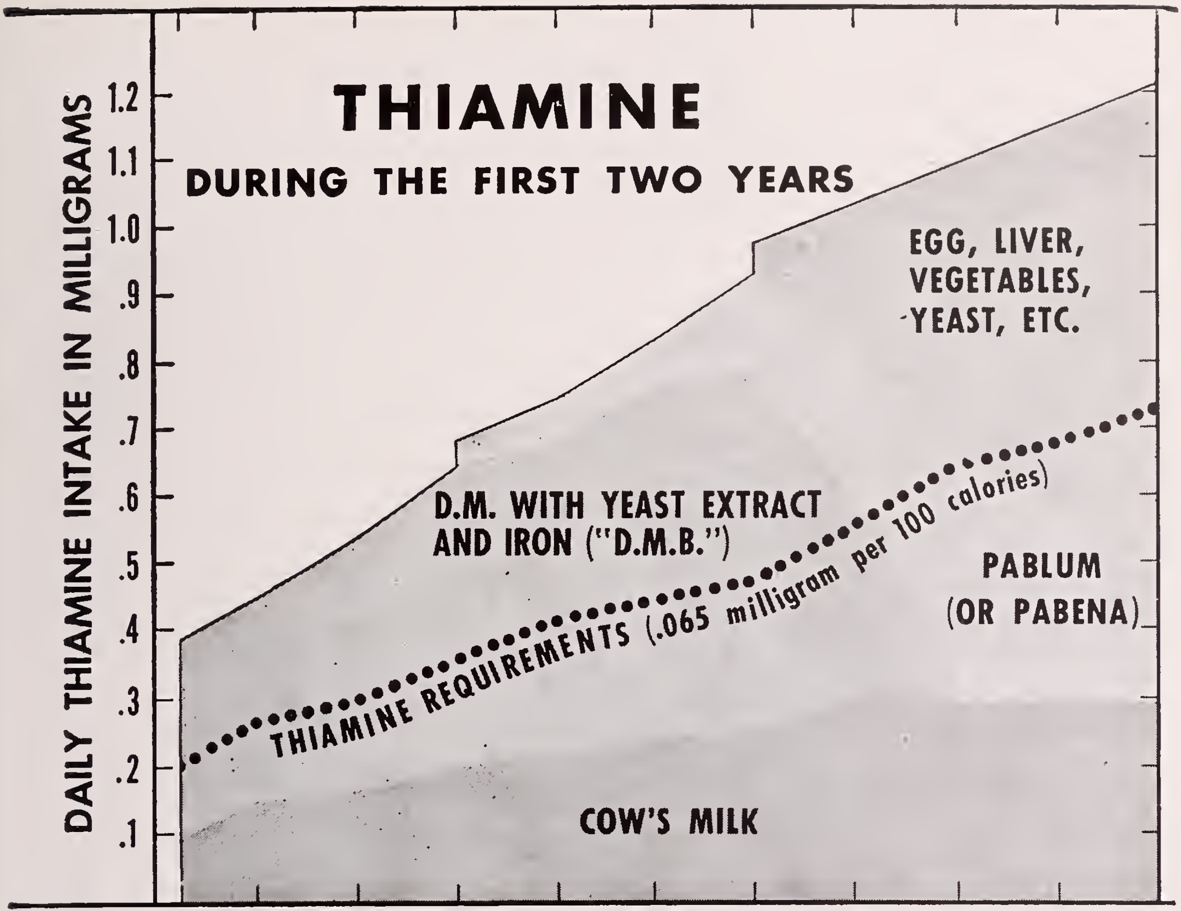

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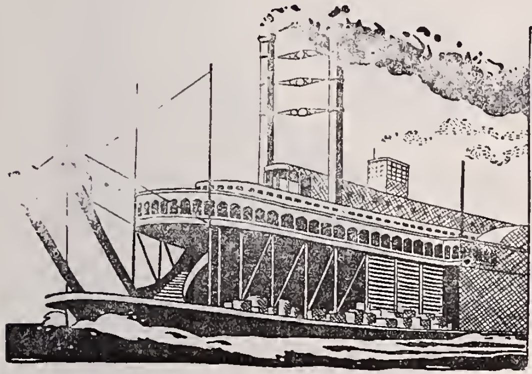

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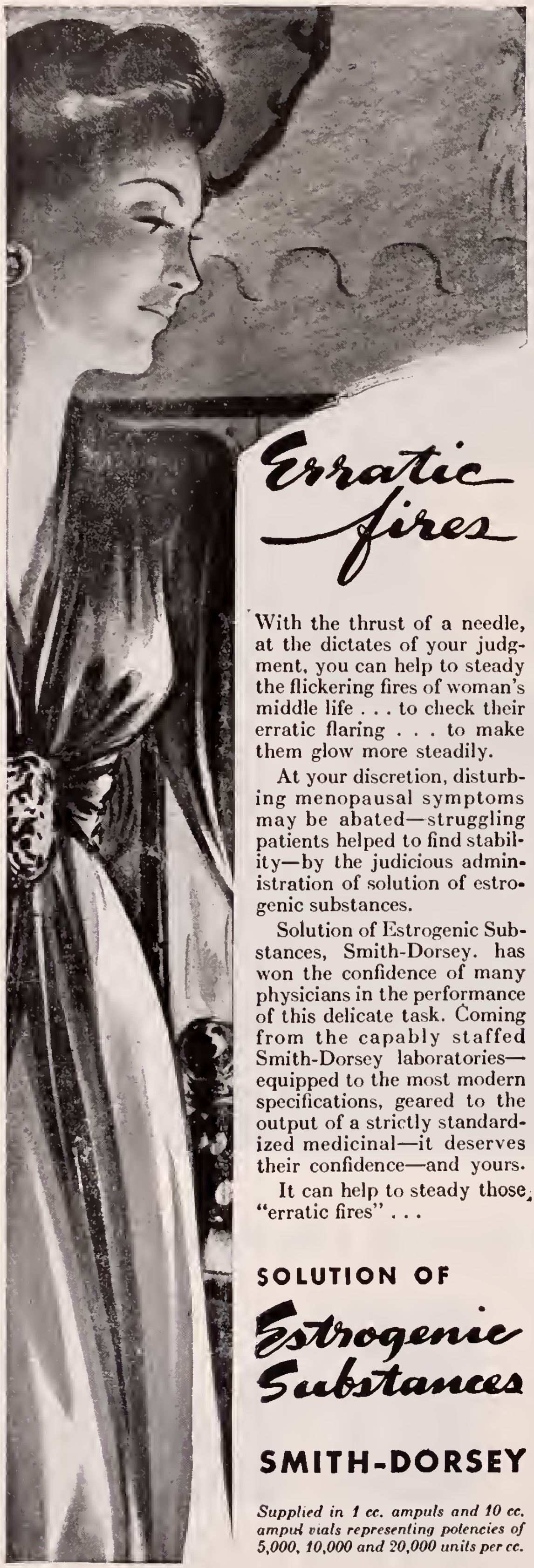

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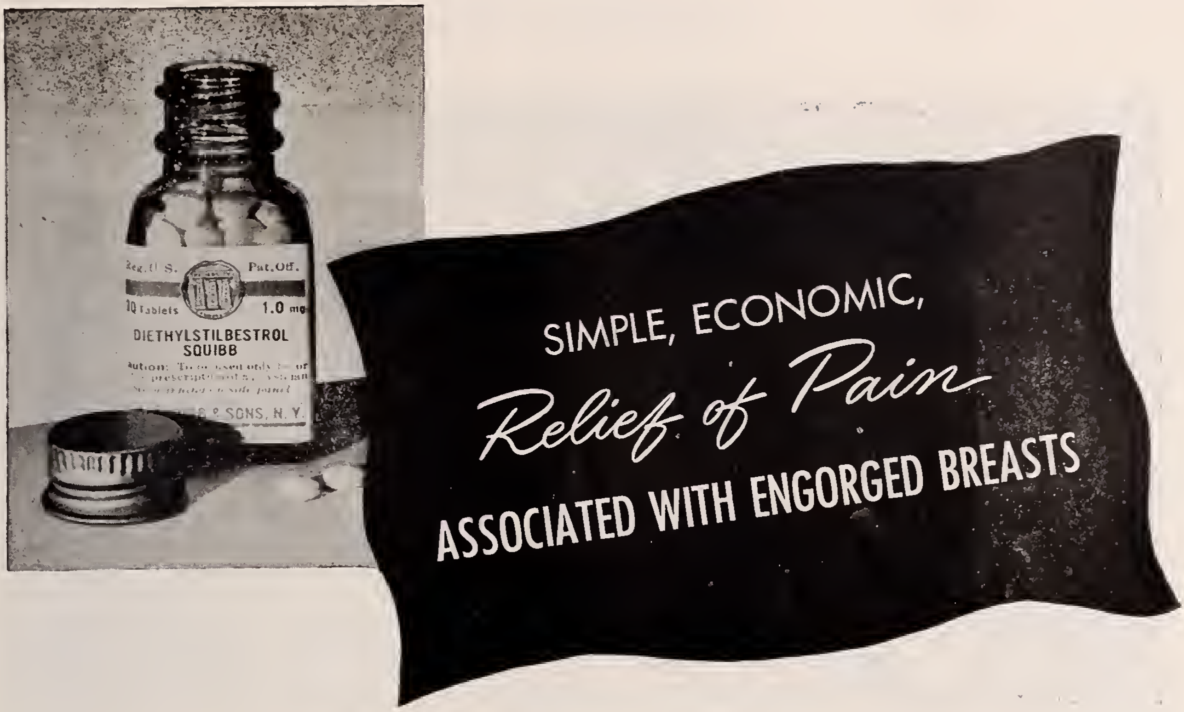

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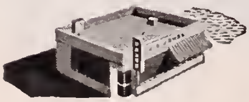

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Cancer of the Larynx*

W. LIKELY SIMPSON, M.D.
Memphis, Tennessee

ETIOLOGY. The cause of cancer of the larynx is as unknown as in other parts of the body, but some predisposing factors should be mentioned. The use of tobacco has often been given as a predisposing cause as well as the presence of syphilis. It seems as if leukoplakia may be a forerunner of cancer. It is possible that hot foods and drinks may have some bearing on the formation of the cancer. Vocal abuse has been mentioned by Jackson as a cause.

The presence of chronic pharyngitis, papilloma, etc., furnishes a fertile soil for the beginning of cancer.

Men are very much more subject to cancer of the larynx than women, in a ration of about ten to one, but the post cricoid type is very much more often seen in women.

Cancer is rare under forty years of age, and most common between fifty and sixty. Occasionally though, cancer is seen around the twentieth year. Cancer of the larynx in the aged is less active than earlier in life.

CLASSIFICATIONS OF CANCER OF THE LARYNX. There are two main subdivisions of cancer of the larynx: 1) intrinsic, and 2) extrinsic.

There are tumors which are both intrinsic and extrinsic, and classified as mixed; also the tumor growths below the glottis are usually placed by themselves and classified as the subglottic type.

INTRINSIC CANCER. Intrinsic cancers are all those tumors involving the ventricular bands and tissue inferiorly. They are the tumors of the vocal cords and ventricular bands.

About seventy per cent of all cancers of the larynx are intrinsic and practically all intrinsic cancers originate in the vocal cords. About five per cent of intrinsic cancers originate on the ventricular bands or in the ventricles.

The usual site of the beginning of cancer of the cord is in the middle third and its growth is anteriorly toward the anterior commissure, crossing to the opposite cord, or to the subglottic space. Cancer of the larynx practically never originates in the arytenoid or interarytenoid space, and seldom in the posterior third of the cord, but may extend to these areas in the far advanced cases. Any of the intrinsic cancers may extend to the epiglottis, aryepiglottic folds, etc., becoming intrinsic, or as a late condition, may extend through the cartilages.

The vocal cords are very poor in lymphatic supply. The intrinsic cord tumors are very late in metastasizinig, as long as the cancer is limited to the cord there is practically no danger of metastasis. Cancer of the ventricle is much more liable to metastasize early, due to their better lymph connections.

Cancers of the cords are practically always squamous cell epitheliomas, but occasionally a basal cell epithelioma is seen, while adenocarcinoma may be seen in the ventricle.

SUBGLOTTIC CANCER. Subglottic cancers originating in the cords are really intrinsic, while as Martland said, "The true subglottic cancer usually arises in the anterior third of the larynx below the cord." These cancers are usually squamous cell epitheliomas and do not attack the lymph glands as long as the growth is intrinsic. The growth may extend into the trachea, epiglottis, posterior wall, etc.

EXTRINSIC CANCER OF THE LARYNX. Extrinsic cancers are those located above the ventricular bands, originating on the epiglottis, aryepiglottic folds, the pyriform sinuses, arytenoids and the pharyngeal wall of the cricoid cartilages, and practically all of these are as the intrinsic cancers, squamous cell epitheliomas.

Invasion of the lymph glands takes place much earlier than in the intrinsic cancers and the growth is much more rapid and the prognosis is very bad, even though the treatment is begun quite early.

SYMPTOMS. The symptoms depend upon the location of the tumor, especially whether it is of the intrinsic or extrinsic type. The all important early and continuous symptom of intrinsic cancer of the larynx is hoarseness. Any patient who is hoarse for as long as three or four weeks should have an examination of the larynx, with special attention to the vocal cords. Hoarseness in a man over forty years of age which does not entirely disappear should call for a thorough study of the larynx. The hoarseness which is seen in the cancer of the larynx is *continuous* and *progressive.*

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*Read before the Section on Surgery at the annual meeting of the Mississippi State Medical Association, Jackson, Miss., May, 1944.

Involvement of the glands of the neck is a late symptom and usually if they are metastatic from an intrinsic cancer, then the case would usually be incurable.

Fixation of the affected cord as a symptom of intrinsic cancer usually does not take place until quite late in the course of the disease.

Aphonia, dyspnea, pain in the ear and abscess formation are all very late symptoms of intrinsic cancer, and if the patient is neglected until these symptoms arise the prognosis as to recovery is very bad.

In the extrinsic cancer, dullness in the throat, slight pain on swallowing, dysphagia, excess mucous in the throat and hemoptysis are comparatively early symptoms. Pain in the ear is quite a common symptom also. Involvement of lymph nodes is much earlier in this type than in the intrinsic. The x-ray findings are very important as well as the appearance of the ulcerated area, etc.

DIAGNOSIS. Persistent hoarseness with an affection of one cord in the middle aged man, with tuberculosis and syphilis eliminated as a cause, would almost certainly make a diagnosis of cancer. Tuberculosis usually is located in the posterior part of the larynx while the cancer seldom is. It must be remembered that cancer may be present in a larynx already affected by tuberculosis or syphilis, or in a patient with generalized syphilis or tuberculosis without any pathology in the larynx except the cancer. If the case is seen early, many examinations may be necessary before a definite diagnosis can or should be made. Anti-syphilitic treatments may be necessary to eliminate syphilis. Occasionally chronic tuberculosis of the larynx has much the appearance of cancer.

Extrinsic cancer of the larynx is rather easily diagnosed, as the location, the appearance of growth, the rapid progress and the age of the patient would leave little doubt, while biopsy can easily be obtained.

In the extrinsic cancers, as those of the epiglottis and aryepiglottic folds, a fungating ulcer with a sensation of fullness, roughness, and excess of saliva, with tuberculosis and syphilis eliminated, should be sufficient for a diagnosis. Hoarseness in extrinsic cancer is not a diagnostic symptom as in the intrinsic forms. Cancers of the post-cricoid region or the pyriform sinus have much mucous and saliva and there may be considerable pain in swallowing. In all types of extrinsic cancers, gland involvement takes place much earlier than in the intrinsic form. All of these growths are firm and hard to palpation.

Biopsy should be done in practically all cases. If frozen sections are to be made, the consent of the patient to do whatever is indicated should be obtained. It is often quite difficult to get enough tissue for a pathologic study. If only a superficial area is obtained, it may not have removed any of the questionable tissue. One negative report should never be final. If the growth is large enough or pedunculated in type so that a good specimen is obtained, usually a study of the tissue will make the diagnosis. Usually a sufficient mass can be removed rather early by the direct method. At times even though there has been a sufficient removal of tissue, there may be a difference of opinion among the pathologists, and in such a case, two or three opinions should be obtained. Usually it would be safe to wait until a definite diagnosis could be made.

PROGNOSIS. If cancer of the larynx is untreated, the patient will invariably die from asphyxia, dysphagia, hemorrhage or some complicating disease as pneumonia, etc. Cancer of the cord is very slow growing. It may be two or three years before metastasis takes place or before it becomes extrinsic. As soon as a cancer breaks out of the larynx, it grows rapidly as extrinsic cancers do, and the prognosis is very bad.

Cancer of the ventricle grows more rapidly than cord cancers, and soon become extrinsic. Occasionally cancers of the cords live eight to ten years without treatment.

Subglottic cancers have good lymphatic communications and soon penetrate the larynx, and the prognosis becomes more grave than in cord cancers. Practically all extrinsic cancers of the larynx, if untreated, rapidly progress and most of the cases die within twelve to eighteen months. Even though treated by x-ray, radium, or operation, the prognosis is very bad.

Statistics show in cancer of the larynx that surgery gives a better prognosis than in surgery for the arrest of cancer in any other part of the body. If sufficient surgery is done in incipient cancer of the cords, practically all cases should be cured, but as the cord lesion becomes more extensive the worse the prognosis.

The prognosis, even with quite early surgical interference in cancers of the ventricles and subglottic areas, will not be as good as in cancers of the cords, and in extrinsic cancers the prognosis is bad, even though comparatively early operation, x-ray and radium treatments are instituted. The operative procedure of Trotter and the x-ray treatment as suggested by Coutard makes the prognosis a little more promising.

More than eighty-five per cent of cancers of the vocal cords, if removed early by the thyrotomy approach, have a five-year cure.

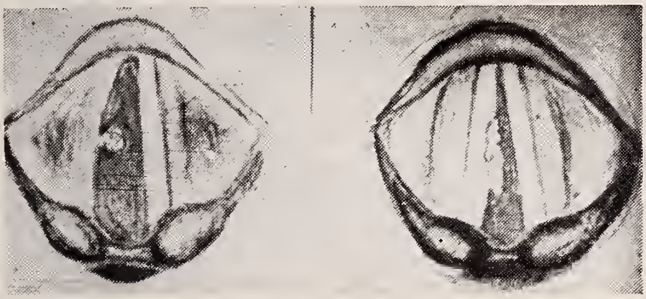

Fig. 1—Early cancer of the vocal cord.

LARYNGECTOMY. The indications for laryngectomy are all intrinsic cancers of the larynx, except those early cases in which thyrotomy may be done, and also a few intrinsic cancers which have become extrinsic.

After a laryngectomy, the usual patient can develop a very satisfactory esophageal voice.

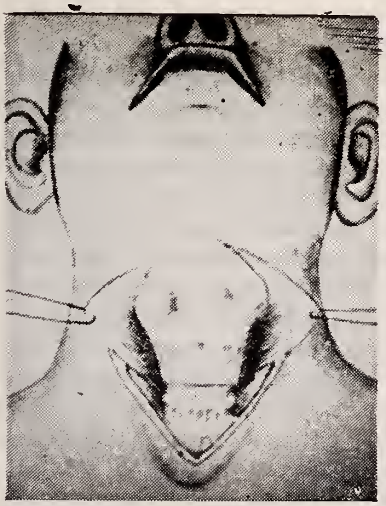

Fig. 3—The first stages of laryngectomy.

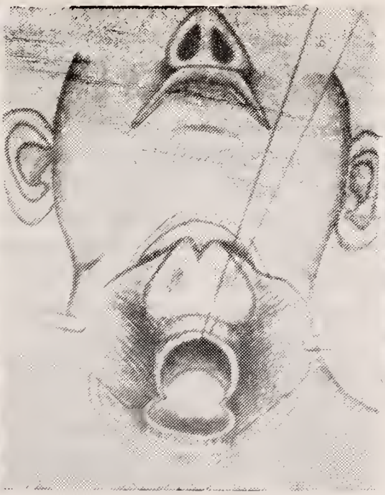

Fig. 4—The larynx almost ready to be removed.

OPERATIVE TREATMENTS. Only two operative procedures will be considered:

1. Thyrotomy or laryngofissure.
2. Laryngectomy.

THYROTOMY OR LARYNGOFISSURE. The indications for thyrotomy are middle-third growths involving only the surface of the vocal or ventricular bands. Occasionally if the growth has reached the anterior commissure and even a slight extension on to the opposite cord, the growth may be entirely removed by this route. If indications are broadened to a great extent the recurrences will be increased.

Thyrotomy may be done with or without a tracheotomy. Usually tracheotomy is not necessary. The larynx is opened in the median line, separating the two wings of the thyroid cartilage, leaving the cricoid intact. The cord with its

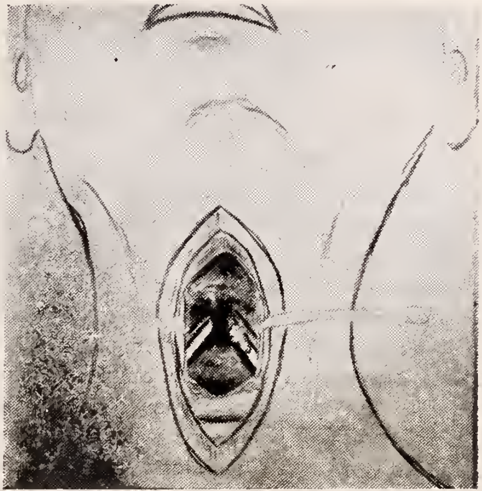

Fig. 2—Thyrotomy. Larynx open. Cancer of the left vocal cord.

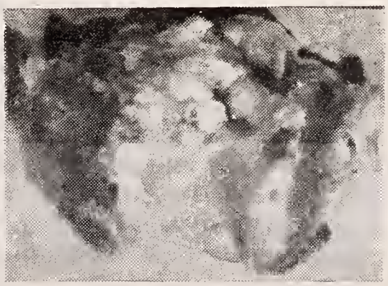

Fig. 5—The larynx after removal. Cancer of the right vocal cord.

pathology can easily be seen and removed. The exterior wound is entirely closed. If the cancer is too extensive for safe surgery through the thyrotomy wound, the previous consent of the patient for doing a laryngectomy should be obtained so that the complete removal of all pathological tissue can be carried out.

RECURRENCES. Recurrences depend almost entirely upon the stage at which the operation is done. If early, there should be a high percentage of cures. If there has been no breaking through the larynx, even though the cancer is quite extensive and if laryngectomy is done instead of a thyrotomy, the prognosis is still very satisfactory.

X-RAY AND RADIUM. The x-ray and radium are indicated as postoperative measures in intrinsic cancers of the larynx, and in palliative measures in inoperable types, but should not be used to cure intrinsic cancers of the larynx. Radium and x-ray in conjunction with surgery are the best means for attacking extrinsic cancer of the larynx. The operative procedure of Trotter and the x-ray technique of Coutard should be studied in dealing with extrinsic cancers of the larynx, and also of the esophageal cancers.

CONCLUSIONS

1. Cancer of the larynx is a curable disease.

2. A very high percentage of cancer of the larynx can be cured by a minor operative procedure, the patient retaining a good voice if the cancer is removed early.

3. The patient can develop a serviceable esophageal voice even though the larynx has been removed.

Endometriosis*

R. C. O'FERRALL, M.D.
Jackson, Mississippi

ENDOMETRIOSIS is a definite disease entity characterized by the presence of lesions containing ectopic uterine or tubal mucosa. Endometriosis is divided into two types: 1) internal and 2) external, the internal being that type which invades the uterine musculature and is continuous with the endometrium. The external type is described as ectopic lesions of endometrial tissue occurring outside the uterus. Seldom are these lesions single in occurrence and in the majority of cases we find a coëxisting internal and external involvement.

In 1929 Sampson first called the attention of the medical profession to endometriosis as a specific pelvic disease. It was he who described the chocolate cyst of the ovary and evolved the theory of retrograde menstrual flow as the cause of the presence of endometrial tissue developing in the pelvis outside the uterus. His theories of retrograde implantation with venous and lymphatic metastases have been attacked by many gynecologists, none of whom have been able to advance a more satisfactory theory. Because of the occurrence in only five per cent of private patients, with an occurrence of only five per cent in a similar number of patients in the charity wards, Meiggs, from the department of gynecology at the Massachusetts General Hospital, has evolved the theory that the increase in the incidence of endometriosis, and probably one of the causative factors, is due to the fact that the patients in the private practice group marry at a later age, and that after marriage contraceptive measures are used for a longer period of time, and that after the first pregnancy subsequent pregnancies are spaced at longer intervals. Many men disagree with this theory, but in my limited observation I think his ratio of occurrence between the private and charity cases is certainly true. In our part of the country where we have a large number of Negro patients, I do not recall having seen a case of endometriosis occurring in a negress.

In checking the records of endometriosis at the Mississippi Baptist Hospital, I am convinced that we are either not reporting our cases properly or are not recognizing the presence of endometriosis in our gynecological service. The concensus of opinion from statistics gathered over a period of twenty years is that endometriosis occurs in from ten to twenty per cent of all patients operated on for pelvic conditions. The incidence of endometriosis reported through the records of the Mississippi Baptist Hospital falls far short of this.

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*Read before the Section on Eye, Ear, Nose and Throat at the annual meeting of the Mississippi State Medical Association, Jackson, Miss., May, 1944.

think we are not careful enough in our pelvic examinations at the time of operation to discover the presence of endometrial transplants or we simply make our final diagnosis as due to some other condition in the pelvis which seems more prominent at the time and omit the associated diagnosis of endometrosis.

As stated, we believe that the incidence of endometriosis is on the increase. At least, we are more aware of it and find ourselves making diagnoses of endometriosis more frequently than in the past.

Each case presents its own problems, and problems that should be seriously considered. A few months ago a young woman presented herself for examination with a chief complaint of pain in her pelvis occurring usually just before and during menstruation. On examination we found a mass in the posterior cul-de-sac, attached to the recto-vaginal fold, the mass being about the size of a lime and exquisitely tender; this, with her previous history, led me to make a diagnosis of endometriosis. This was a young girl, about twenty years of age, who expected to be married in a few weeks to a young medical student. The next question was what we should do to relieve this young woman and yet be conservative in our treatment in order to leave her with the ability to have children. Rather than subject her to an operation at this time, we advised conservative treatment and frequent observation from every three to six months. It may be that the endometriosis has already extended to the point where she will be unable to conceive, but at least our conscience is clear in giving her every opportunity that she could have to go ahead and have a family before any radical operation is done. This may have been the type of case in which endocrine therapy would have been advisable. Dr. Leo Wilson reports the use of testosterone proprionate in one case of endometriosis. It was his experience that the use of the testosterone period of twelve months gave a great deal of relief of pain and a marked retrogression in the size of the tumor; however, after the injections of testosterone were discontinued the pain returned and the tumor began to enlarge again.

I recently talked with one of the leading gynecologists in this part of the country and he reports a case of extensive endometriosis in a woman twenty-three years of age. He describes her condition as one of the most extensive that he has seen in the last three years; however, he chose to be conservative and removed only one ovary and tube and did a myomectomy on the uterus. This was done two years ago and at the present time the woman is about four months pregnant. I think this is an unusual case because with extensive endometriosis we usually find a permanent sterility, but judging from this case we are justified in not being too radical in our surgery. Had this been a woman of forty years, I am sure that at the primary operation the conservative surgery would have been a bilateral salpingo-oöphorectomy with hysterectomy.

I do not propose to discuss each of the various areas in which endometriosis may occur. I would like to take a few of the most important locations and devote a short time to each. I have previously mentioned the occurrence of endometrioma of the rectovaginal fold. Involvement in this area is usually not difficult to diagnose because, as a rule, it is easily palpated and the patient gives a history of severe pain just before or during menstruation and most of these patients complain of dyspareunia and pain at the time of defecation. If the tumors are taken early, before they invade the bowel wall or before they become too extensive, they can be removed by the vaginal route; however, if operation is postponed until the endometrioma has invaded the rectum and has become so extensive, the safest and most satisfactory form of operation is removal of all ovarian tissue. I think it is the popular opinion now that in cases of this type, where it has become necessary to remove both ovaries, it is also wise to do a hysterectomy.

In a series of 576 cases of endometriosis operated upon at the Mayo Clinic, there were six cases of adenomyoma of the umbilicus. The presence of pain in this area associated with discharge of blood at the time of the menstrual period each month, of course, is very annoying to the patient and makes her seek relief more readily than if the lesion has occurred inside the peritoneal cavity. The adenoma in the umbilicus is usually a tumor with bluish discoloration, varying in size from 1 to 3 cms., and occasionally being as large as 5 cms. These tumors of the umbilicus follow cases of hysterectomy or any operation where the endometrium of the uterus has been invaded through the abdominal wall. Not only might this implantation occur in the umbilicus but it might also occur in the wall of the incision causing a breaking down of the scar with bleeding occurring at regular or irregular intervals. We have experienced one such case in which we resorted to excision of the previous incision in the abdominal wall, but we evidently failed to get all the endometrial tissue at the second operation and when we last heard from the patient she was continuing to have trouble. In cases where the umbilicus is invaded, wide excision with closure by overlapping the fascia, as in ventral hernia, will usually relieve the situation.

One of the most frequent places invaded by the ectopic endometrium is the ovary. The ovary may have several small reddish brown, or purplish lesions about its surface, or it may be a cyst several centimeters in diameter filled with a thick bloody-colored fluid, or an almost mushy chocolate-colored fluid. Of course, all ovarian cysts containing bloody fluid are not of endometrial origin. In bloody cysts of the ovary not of endometrial origin, and where it can be conclusively proved at the time of operation that the cyst is not of a malignant type, it is not necessary to remove both ovaries. In cases where the cysts have been of long standing and have become large, there are usually dense adhesions walling in and plastering the cysts to the broad ligaments. It is almost impossible to remove one of these large cysts without rupturing and spilling the contents over the pelvic cavity. In women under thirty years of age, if the lesion is entirely confined to one ovary, although that ovary may be very large with many adhesions involving the tube and broad ligament on that side, it is my opinion that only the ovary involved should be removed and the other ovary left intact to carry on its normal function. If, however, besides the involvement of one ovary with a large chocolate cyst, there are innumerable transplants in the pelvis, on the other ovary and particularly involving the bowel, I think a radical procedure of the removal of both ovaries and uterus should be carried out. In cases of young women in whom only one ovary is involved at the time of operation and this is removed, it is possible that subsequent operation may have to be undergone, but we know that these conditions are not malignant and that a risk of another operation would probably outweigh the disturbance caused by removing both ovaries at an early age. I now have under my care a young woman who was operated on for a condition of this kind about three years ago. I was inclined to be conservative and removed only the involved ovary and tube. Since that time she has had only the slight discomfort in her pelvis and has experienced a normal menstrual life.

The occurrence of endometriosis in the lower portion of the intestinal tract is one which should receive serious consideration. Implantation on this area of the bowel occurs more frequently than one might think. Sampson reported intestinal implants in 13 out of 64 cases, the rectosigmoid being the most common area involved. The importance of differentiating such tumors from carcinoma and inflammatory conditions of the bowel is easily realized. Endometrioma occurs only in the female and usually after the age of thirty. These patients are generally in good health and do not present a picture of cachexia and loss of weight, as seen in the presence of carcinoma. They give a history of dysmenorrhea, pain on defecation (usually more acute and severe during menstruation); they do not have a history of bleeding from the bowel; x-ray examinations are not conclusive; and proctoscopic examination usually does not show evidence of involvement of the mucosa of the bowel because of the fact that the endometrial lesions involve only the serosa and musculature, whereas carcinoma usually presents an ulcerative area in the mucosa of the bowel. The history reveals that the lesions caused by endometriosis are of longer duration before serious symptoms are noted than that of carcinoma of the bowel.

The surgical procedure that should be carried out in cases of endometriosis occurring in the sigmoid and rectum depends upon several points: the extensiveness of the lesion and whether or not the bowel is obstructed or may become so in a short time; the age of the patient and her ability and desirability to conceive if a conservative operation is resorted to, and these rare cases of poor operative risk where x-ray or radium may be used. In the patient thirty-seven years of age, or older, with marked involvements of the bowel without definite obstructive symptoms and with transplants spread over the entire pelvic cavity, or a part of it, surgical castration with hysterectomy will completely relieve the situation. The implants failing to receive stimulus from the ovaries will soon retrogress and the bowel will retain its normal condition. In the case of a young woman who is desirous of having children and if the condition of the pelvic viscera—the tubes and ovaries—seems favorable to pregnancy, then a resection of the bowel with complete removal of the involved area should be the operation of choice, with destruction of other small implants by fulguration or surgical removal. In those cases of complete obstruction with extensive involvement of the lower portion of the bowel and such conditions that would make it impossible to remove all of the ovarian tissue, a colonic stoma should be made, followed by x-ray or radiation over the pelvis for the destruction of the ovarian tissue. The endometriosis following this radiation will soon subside and the colonic stoma can be closed and the fecal stream resume its normal course.

SUMMARY

We believe that endometriosis is definitely on the increase and that no definite cause of endometriosis has yet been established. A most recent suggestion as to the cause of endometriosis is that by Meiggs, in which he claims that the postponement of pregnancy until late in life may have some influence on it. Endometriosis may be treated both conservatively and radically. In those cases with little involvement in women under thirty, we feel that conservative surgery should be the rule, while women with endometriosis over thirty-seven should be treated radically. We believe that in being radical with these cases, we are really being conservative in that in most instances we are saving them from undergoing surgery in later life.

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DISCUSSION

DR. W. H. BRANDON (Clarksdale)—Dr. O Ferrall approaches the subject from a very practical, workable standpoint. When one considers such subjects as the viability of desquamated endometrial tissue, retrograde menstruation, retrograde peristalsis of the tube, the presence of endometriosis in the tube and blood in the tube and peritoneal cavity during menstruation, all of which have been confirmed by many investigators, one must become increasingly prone to consider that endometriosis occurs from multicentric origins. Sampson's implantation theory has been widely accepted and at the present time still remains the only one with substantial experimental proof.

If we accept as true the theory that endometriosis develops from implantation of fragments of mullërian tissue from the uterine lining, then certain definite prophylactic measures should be undertaken before surgical and diagnostic procedures are done.

(1) Pelvic examinations should preferably be made between menses and not about time of menses.

(2) Intra-uterine manipulation should not be done at or near menses. Curettage, uterosalpingography with air or contrast media, etc.

(3) Cervical obstruction and misplacements of uterus should be corrected for better drainage of menstrual blood.

(4) In those known cases or in suspected cases of endometriosis, hormonal stimulation should be avoided.

(5) Ventral fixation of the uterus is contra-indicated because of possible endometrial implantation in the abdominal wall.

(6) Where bilateral salpingectomy is contemplated, hysterectomy should be considered, due to possible development of endo-salpingosis.

(7) When considering transplantation of ovarian tissue to aid in preserving ovarian function, endometrial implantation must be considered as a serious consequence.

(8) Postoperative endosalpingosis occurs in some plastic operations on fallopian tubes for relief of sterility.

* * *

DR. R. L. SANDERS (Memphis)—I know of no subject that has intrigued me more, and has created more interest in my mind than this particular one. In the early days we saw much endometriosis and did not know what it was. It is an old disease only recently discovered. I wish to call special attention to the frequency of the disease. Since 1936 it has been my misfortune to operate on nearly 250 of these unfortunate young women. The sad and distressing feature about it is that it appears mostly in young women. I have had quite a number under twenty, many up in their twenties and some in their thirties. When they come up with a destructive disease like this and realize it is all over as far as their reproductive life is concerned, it is a tragedy. It is invasive, it is destructive to the pelvic structures and nothing but clearing out the pelvis will stop this disease. One out of every five pelvic operations—the female pelvis—has been endometriosis. It is exceedingly common, and distressing to handle, but not confined to the surgeon by any means; the internist sees it every day. Also, it does not confine itself to the pelvis, but occurs elsewhere. (Here two slides were shown).

Dr. L. B. Otkin, (Greenwood)—Dr. O'Ferrall gave us a most excellent paper, but he failed to mention one complication that I wish to report. This was a white woman forty years old, married fifteen years without a pregnancy. She came in complaining of irregular, profuse, painful menstruation accompanied by a bloody cystitis. Examination revealed an enlarged, painful uterus—painful on pressure, and several hard, nodulary masses in the pelvis. On opening the abdomen we found a typical endometriosis mass and in addition a mass on the anterior uterine wall that invaded the bladder. We did a bilateral, supravaginal hysterectomy, resected one-third of the bladder wall. The mass that was invading the bladder was about the size of a big walnut and examination revealed it not to be a carcinoma but an endometriosis growth. The woman went on to recovery. That was four years ago and she has been a well woman since.

CHAIRMAN OF SURGICAL SECTION'S ADDRESS

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Back of speech, if it is to be of value in a doctor's life, thought must stand. Silence in a doctor's life is the medium in which great things fashion themselves together and at length may emerge full formed and majestic, into the daylight of life, thenceforth to rule. Doctors should be masters of themselves, Their will is made up of all the impulses arising from the general nervous system, stimulating their passions, appetites within their body, plus reasoning. All are mixed and mingled and give them inter-relations between themselves and their silent Partner.

Between birth and death, physicians see mystery in all walks of life. With death they mourn, with the living they struggle, for the future they plan. They have a few years filled with freedom and good thinking, when their brain becomes a powerful, conquering, constructive force, when truth becomes the reflection of knowledge. Doctors have built on truth and truth is the fruit of their study.

Doctors do not exaggerate their own importance nor size up their own miseries. They are ants in a human anthill, working ants that waste no power. They harness the laws of nature, at the positive and negative pole of life allaying pain, reconstructing human flesh, and glorifying the future.

Each of us comes into life wondering and leaves it wondering, Is this life a reality, or is the real thing that other half of the circle which lies beyond the grave and before the cradle? All that any of us know is the thought in our own minds, the impressions that our senses bring to us. Outside of that, we have nothing but the comforting assurance of Faith. It is left with our silent Partner. Not knowing what becomes of that little particle of energy we call our soul, yet we know it is a spark of the Eternal fresh from the altars in Heaven, and entrusted to your physical body and mine. It is His plan that when this spark is returned whence it came, it shall have loved Right, though cast down, hated ill, lifted enlightenment, and labored to banish pain, for

> . . . God abides, and in man's heart
> Speaks with the clear unconquerable cry
> Of energies and hopes that can not die.

A Resume of Some Common Blood Diseases*

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THE BLOOD dyscrasias offer an interesting and, at times, a most perplexing group of diseases of the general practitioner and the various medical specialists, as well as the hematologist. Blood dyscrasias are not primarily diseases of the blood itself, but of the blood-forming organs. The blood merely reflects the changes in these organs. Clinical manifestations of blood diseases are protean, so that patients with primary blood dyscrasias may consult their physicians with innumerable subjective or objective symptoms and varied physical signs. For example, the general practitioner or the internist may be consulted by the patient with cyanosis dyspnea who later will be found to have polycythemia. The advice of the otolaryngologist is not infrequently sought for treatment of a sore throat by the patient with infectious mononucleosis. The infants with erythroblastosis foetalis are today being treated more intelligently by pediatricians because the etiology of the disease is well established and rational therapy is outlined. I could cite examples of the interrelationships of modern hematology and practically all fields of medical specialization, but that would occupy too much time. A major responsibility in this field rests with the physician who is consulted by patients with varied and bizarre signs and symptoms due to a primary blood disease. It is impossible to over-emphasize the importance of recognizing the various blood diseases because in many instances dramatic results may be obtained by specific therapy.

Ordway and Gorham[1] state that four outstanding landmarks causing one to suspect that an unknown condition in any particular person may be a disease of the blood are: 1) anemia, 2) enlargement of lymph nodes or spleen, 3) hemorrhage into the tissues or from the mucous surfaces and, 4) throat lesions, particularly of the membraneous or ulcerative type, varying greatly in degree, extent and type. These four criteria certainly include the major and more important findings in the patients with blood dyscrasias. I have selected cases to illustrate some clinical and hematologic observations which are important in certain blood diseases.

MACROCYTIC HYPERCHROMIC ANEMIA

CASE No. 1—White female, aged 46, admitted to hospital on November 10, 1942, with complaints of dyspnea, swelling of feet and abdomen for three days. She had been treated for heart trouble for several weeks, but her condition grew rapidly worse despite bed rest and medicine. Her appetite has been poor for one year and during past two to three months she has eaten nothing but starchy foods.

Physical Examination: Temperature 99.4° pulse 90, respiration 40, blood pressure 130/70. Skin pale, lemon yellow in color. Marked edema of face, abdomen and extremities. Patient gasping for breath. Irrational. Conjunctiva and buccal membranes pale. Tongue smooth. Moist rales at lung bases. Reflexes normal.

Laboratory Studies: Urinalysis negative. Blood studies revealed 1,100,000 red blood cells and 4.3 grams hemoglobin. Color index 1.2. Leukocytes 12,100 with 82% mature neutrophils, 2% band forms and 16% lymphocytes. Red cells showed anisocytosis and poikilocytosis, few macrocytes and 2 normoblasts per 100 leukocytes. Blood urea nitrogen and creatinin were normal.

Course: The patient was given one whole blood transfusion within two hours after admission to the hospital and another transfusion the following morning. Liver therapy was instituted. November 12, patient more comfortable. Edema less. Given another blood transfusion. November 13, red blood count 1,730,000 with 7.1 grams hemoglobin. Color index 1.2. Many macrocytes, 20 normoblasts per 100 leukocytes, 1.5% reticulocytes, fragility test normal. Gastric analysis revealed no free hydrochloric acid, red blood count 2,840,000. November 23, red blood count 3,360,000. No edema. November 26, red blood count 3,680,000, hemoglobin 9.3 grams. December 5, red blood count 3,980,000, hemoglobin 11.2. Discharged to continue liver therapy.

COMMENT

This is a fairly typical Addisonian or pernicious type anemia as evidenced by the response to liver therapy, the blood picture and achlorhydria. However, when the patient was admitted to the hospital the extreme anemia had produced such marked symptoms as to necessitate blood transfusion as an actual emergency procedure. There were no signs of central nervous system lesions in this patient.

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*Read before the Section on Medicine at the annual meeting of the Mississippi State Medical Association, Jackson, Miss., May 10, 1944.

Pernicious anemia may be considered as a multiple deficiency disease, not caused only or primarily by lack of food factors, but by defective modification, absorption and utilization of dietary substances. Cooley[2] considers heredity important in this disease and presents ample evidence of a high incidence in certain families. He also believes that the incidence of gastric malignancy is suspiciously high in the families of patients with pernicious anemia.

Pernicious anemia is seldom seen in pure blooded Negroes, although it is reported in mulattoes.

The studies on a patient with a pernicious type anemia should not be considered complete until all examinations at the disposal of the physician have been used to eliminate the possibility of malignancy. It is well to keep in mind the fact that many other conditions aside from classic pernicious anemia in relapse may cause a severe macrocytic anemia.

SICKLE CELL ANEMIA

CASE No. 2—Colored male, aged 6, admitted to hospital on September 23, 1943, complaining of weakness and sore throat for one week and pain in left hip and shoulder for twenty-four hours. Father stated patient's eyes have been yellow at intervals during past two months.

Physical Examination: Thin, poorly nourished child with temperature 100.4°. Mucous membranes were pale and conjunctiva icteric. Thorax and abdomen were negative. Left shoulder and left hip tender to pressure; no swelling or redness. Pain on motion in both joints.

Laboratory Studies: Urinalysis negative. Blood studies revealed 2,880,000 red blood cells, 50% hemoglobin, 29,700 white blood cells and normal differential. Red cells showed anisocytosis, poikilocytosis, polychromatophilia and some stippling. A few sickle-shaped and many elongated erythrocytes were present on the smear. There were 15 normoblasts per 100 white blood cells. A study for sickle cells using the technique of Beck and Hertz[3] revealed 95% sickle cells (50% crescent shaped, 25% star shaped, 25% holly leafed shaped), and 5% normal red blood cells. Icterus index was 12.

Course: The patient was given a 300 cc. whole blood transfusion on September 25. September 26, the red cell count was 3,520,000 with 69% hemoglobin. Pain in shoulder and hip completely relieved. Patient discharged with instructions to return for check-up in one week. To date patient has not returned so presumed to be symptomatically well.

COMMENT

Sickle-cell anemia is fairly rare, but according to Diggs[4], it is the most common primary blood dyscrasia in Negro hospital patients. It is essentially a hemolytic anemia in one possessing the sickle-cell trait. The blood elements, although subject to some variation, present during the crises or anemic phases of the disease, a diagnostic blood picture. It is seldom a diagnosis can or should be made on finding sickle cells in a fixed smear, because it has been definitely pointed out that sickle cells can be seen in non-anemic patients whose blood is otherwise normal. A patient with anemia associated with jaundice, leukocytosis and premature erythrocytes should arouse suspicion, particularly if the patient is a Negro. If the sickle cell phenomenon is then demonstrated in a moist preparation, the diagnosis is certain. The patient's family should be examined for the sickling trait because there is a definite hereditary tendency. Clinically, jaundice, leg ulcers, joint pains, cardiorespiratory symptoms and gestational disturbances are commonly associated with the anemia. Pregnancy seems to have an unfavorable effect on a woman with sickle cell anemia. Abortions and still-born macerated infants are common. Blood transfusions have been very beneficial in most cases of sickle cell anemia and usually carry the patient through the crisis or anemic phase of the disease. Later on an infection, injury, pregnancy, etc., may precipitate subsequent crises in the patient with sicklemia.

LEUKEMIA

CASE No. 3—White female, age 36, admitted to hospital July 20, 1943, complaining of sore gums around left lower wisdom tooth of two weeks' duration. She had consulted her dentist who referred her to physician. Low grade fever for two days.

Family History: First cousin died of leukemia.

Physical Examination: Temperature 101.2° pulse 90, blood pressure 115/65. Well nourished. Swelling and redness of gums around a partially erupted, left lower wisdom tooth. Bilateral submaxillary lymphadenopathy.

Laboratory Studies: Investigation negative except for hematologic studies. There were 4,440,000 red blood cells with 10.7 gms hemoglobin. Leukocytes were 15,600 with 61.5% small lymphocytes, 34.5% immature lymphocytes (lymphoblasts), 2.5% monocytes, and 1.5 polymorphonuclear neutrophils. Subsequent blood studies revealed a gradually increasing leukocyte count with a marked increase in the percentage of immature cells. On July 21, the W. B. C. was 21,800; July 26, 41,300; July 31, 44,300; August 2, 90,400; August 4, 131,200; August 6, 134,900; and on August 8, 269,400. The platelet count dropped from 250,000 on admission to 100,000 on July 28. However, at no time was there any purpura or hemorrhage aside from a few petechiae on the soft palate. Therapeutic measures such as x-ray therapy and blood transfusions were without benefit. The patient died on August 8, 1943, nineteen days after admission. The final diagnosis was acute leukemia.

CASE No. 4—White male, aged 70, admitted to hospital on August 24, 1943, with complaints of redness, itching and thickening of skin for thirteen months. Itching so severe he pulls off chunks of offending areas of skin with his nails.

Physical Examination: Fairly well nourished and developed white male with erythema and thickening of skin over entire body, but more marked over neck and chest. Hair was scant and perspiration free. There were fissures and areas of desquamation over arms, trunk and thighs, probably traumatic due to scratching. Lymph nodes, spleen and liver were not palpable.

Laboratory Studies: Urinalysis negative. Blood studies showed 4,970,000 red blood cells with 14.3 grams hemoglobin. Leukocytes were 97,900 with 85% small lymphocytes. Biopsy of skin of chest wall showed the derma densely infiltrated with lymphocytes. A diagnosis of chronic lymphatic leukemia and leukemia cutis was made.

Course: The patient left the hospital on August 28, 1943, against the advice of his physician. We have no communication as to his progress.

COMMENT

These two cases contrast the rapid, fulminating course of an acute leukemia with the longer duration of the chronic leukemia. It is impossible in some instances of acute leukemia to distinguish between a myelogenous and lymphatic leukemia, owing to the close morphologic similarity between the lymphoblast and myeloblast. For that reason an unqualified diagnosis of acute leukemia is occasionally made.

Bone marrow biopsy or aspiration may be of utmost importance in making an early diagnosis in acute leukemia before manifestations are present in the peripheral blood stream.

The presenting complaint in the first patient simply re-emphasizes the importance of mouth and throat lesions in blood dyscrasias. The dermal lesions in the second patient are a complication seen in acute, chronic and aleukemic phases of any of the leukemias, but more commonly in chronic lymphatic leukemia. Ormsby and Montgomery[5] state that leukemia cutis may be present without hemocytologic or other evidence of systemic involvement. The skin lesions may be localized or diffuse, as in this patient.

Concerning therapy, there is little can be said for this group of diseases. Leukemia is still considered a fatal disease, although the duration may be from five to ten years in some cases of chronic lymphatic leukemia. X-ray is sometimes beneficial in prolonging life, but x-ray therapy will not change an acute into a chronic leukemia. Since the advent of the cyclotron certain radioactive isotopes of several elements have been used as therapeutic agents. Radioactive phosphorus (isotope P. 32) has been most extensively used and is administered intravenously. It causes no untoward after effects and has been found as effective as roentgen rays in the treatment of patients with chronic leukemia. All therapy has been disappointing in the acute leukemias.

INFECTIOUS MONONUCLEOSIS

CASE No. 5—White male, aged 15 years, admitted to hospital on March 12, 1944, complaining of fever, sore throat and swollen neck. Five days ago started with sore throat and swelling of neck. Two days ago consulted physician who took smears of throat and made diagnosis of diphtheria. Patient given 20,000 units of diphtheria antitoxin. This dose was repeated the following day. Temperature remained elevated and throat continued swollen and sore so he was brought to the hospital.

Physicial Examination: Temperature 102.2°, pulse 130. Many enlarged cervical lymph nodes bilaterally. Tonsils enlarged and covered with white, easily detached exudate. Remainder of examination negative.

Laboratory Studies: Urinalysis showed slight trace of albumin. Red blood cells were 4,400,000 with 78% hemoglobin. White blood cells were 15,300 with 67% lymphocytes, 21% mononuclear cells and 12% neutrophils. Smear of throat showed fusiform bacilli and spirochetes of the type seen in Vincent's angina.

Course: In view of diagnosis of diphtheria it was thought advisable to continue with the diphtheria antitoxin, so 30,000 units were administered. March 13, a heterophile antibody test for infectious mononucleosis was positive in dilution of 1:896. Sulfadiazine given 15 gr. every four hours. March 14, temperature was 99.4°. Patient comfortable. March 17, blood count 13,100 with 83% lymphocytes and mononuclear cells. March 18, patient discharged from hospital to return for recheck in one week.

COMMENT

The diagnosis of infectious mononucleosis seems probable in this case in view of the clinical and laboratory findings. However other possibilities must also be taken into consideration because it is a well recognized fact that administration of serum will lead to the production of "heterophile" antibodies and cause agglutination of the sheep cells in fairly high titer. In diphtheria the patient's blood frequently shows an increase in large mononuclear cells as was very evident in the cases reported.

Infectious mononucleosis is of relatively frequent occurrence but the disease is often not recognized. Accuracy of diagnosis is important, because it may be confused with leukemia, mumps, diphtheria, pertussis, streptococcic pharyngitis, follicular tonsillitis, and various other infections. Blood studies probably afford the best basis for diagnosis of the disease, although in certain instances it may be impossible to rule out lymphatic leukemia. In those instances the heterophile antibody test, and the course of the disease eventually offer the correct diagnosis.

The heterophile test was positive in 90 per cent of the series of cases of infectious mononucleosis reported by Werlin, Dolgopol and Stern[6]. It is well to keep in mind that occasionally this disease gives a false positive Wassermann reaction. From the clinical standpoint the outstanding features of infectious mononucleosis are its variability of clinical symptoms and severity and the almost invariable favorable termination. One complication occasionally seen is spontaneous rupture of the spleen. Ziegler[7] has recently reported one such case with fatal outcome.

ERYTHROBLASTOSIS

CASE No. 6—White male, aged 18 months, seen in clinic on December 8, 1943. Mother states child has been anemic since three months of age. Full term baby, normal delivery, weight 9 pounds. Breast fed to two weeks and then breast and formula. Onset of icterus at three months. Blood studies revealed severe anemia and typical blood picture of erythroblastosis (according to family physician). Given transfusion of 150 cc whole blood using father as donor and two weeks later another transfusion using mother as donor. There was little or no symptomatic improvement and from that time to the time of admission to clinic has been given fourteen more whole blood transfusions. Mother's first pregnancy ended in miscarriage and second child died of erythroblastosis at nine months of age.

Physical Examination: Well developed and nourished infant, not acutely ill, but very pale. Soft apical systolic murmur. Liver and spleen not enlarged.

Laboratory Studies: Showed 1,790,000 red blood cells and 30% hemoglobin. White blood cells were 10,700 with normal differential. Red blood cells showed anisocytosis, poikilocytosis and polychromatophilia and about 1/2 per cent erythroblasts. Rh determination was positive while determinations on parents showed father Rh positive and mother Rh negative.

Course: Patient transfused with 150 cc. Rh negative blood on day of admission. December 22, 1943, transfused with 200 cc. Rh negative blood. Blood count revealed 2,850,000 red blood cells and 43% hemoglobin. Since then difficulty has been experienced obtaining Rh negative, compatible type blood donors. Two transfusions or resuspended red blood cells, both Rh positive blood were given the patient, during March and April, 1944. The last blood count showed 3,200,000 red blood cells, 52% hemoglobin.

COMMENT

An outstanding contribution to hematologic knowledge was made by Levine[8] and his coworkers when they used Landsteiner and Wiener's recently discovered Rh factor to elucidate the etiologic mechanism of erythroblastosis foetalis. Erythroblastosis represents a picture of deviation from normal hematopoiesis in the fetus and newborn infant. It may vary from mild anemia to extreme disorganization of the blood equilibrium. Approximately 90 per cent of all cases of erythroblastosis have been shown to be due to iso-immunization of a mother who is Rh negative and lacks the rhesus agglutinogen in her blood by the Rh factor in the red cells of the fetus. The agglutinins formed in the mother's blood pass through the placenta into the fetal circulation and there agglutinate and destroy fetal corpuscles.

The case presented above is somewhat unusual because of the late onset of clinical symptoms at three months of age, although Sobel[9] has reported two cases that occurred at ages of 6½ and 17 months. The possibility has been mentioned that anti-Rh iso-agglutinins can be transmitted to the nursing infant through the mother's milk and this might apply in our case because the infant was breast fed. The anti-Rh iso-agglutinins have been demonstrated in a mother's blood for from two months to two years post-partum. Dockeray and Sachs[10] state that Rh antibodies may be found in the mother without erythroblastosis occurring in the child. They cite a case of an Rh negative mother with an Rh positive husband who gave birth to an Rh positive child. The child was normal and never presented any sign of erythroblastosis. Rh antibodies were still detectable in the mother's blood 5½ years after the birth.

Most observers have found blood transfusions of specific value in the treatment of erythroblastosis, although some cases are refractory to this measure. Transfusion supplies red cells and hemoglobin and accelerates the elaboration of antihemolytic factors and restores the balance between blood production and blood destruction.

SUMMARY

1. It is becoming increasingly important for all physicians, whether general practitioners or specialists, to be cognizant of the fact that primary blood diseases may present varied and bizarre signs and symptoms.

2. Hematologic examinations should be undertaken in all patients presenting certain of the more important criteria of blood diseases, such as, anemia, enlargement of spleen and lymph nodes, hemorrhage, and mouth and throat lesions.

3. The recognition of blood diseases is essential because, in many instances, remarkable and dramatic results are obtained by specific therapy.

4. Six cases of blood dyscrasias are reported and commented upon in order to illustrate a few of the important features in blood diseases.

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Child Guidance*

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IT HAS NOT been so long ago that the efforts of public health workers were concentrated almost entirely upon the conquest of epidemic disease. The problems presented by outbreaks of yellow fever, smallpox, typhoid fever diphtheria and other communicable diseases were so numerous and time-consuming that little attention could be given to anything else in the early days of public health evolution. As medical science progressed and effective disease control measures were instituted, public health interests were focused upon the positive aspects of health and a new emphasis was placed upon health promotion as well as disease prevention. The development of maximum physical and mental fitness to insure the individual's opportunity to be a useful and contributing unit in a society whose progress is dependent upon freedom from disease and other encumbrance, soon became a major aim of the public health program. This emphasis has been growing in recent years and meticulous care is being given the public health program with a view to including activities considered most essential to the health and welfare of the individual.

In September, 1943, the Mississippi State Board of Health established in Jackson a single child guidance center, modeled after the famed Judge Baker Guidance Center in Boston. This new program represents another milestone in Mississippi's public health progress and came at a time when nation-wide attention was being focused upon facts and figures from Selective Service and the War Department relative to the number of maladjusted individuals unable to make the grade for military service, or individuals who had entered the service but had been returned to civilian life because of inability to adjust to the hardships and inconveniences imposed through military duty. Much of this might have been averted, authorities point out, had the conditions which lead to such maladjustment been dealt with adequately in the formative years of these people's lives. A child guidance program is the most logical approach to preventing such wide-scale recurrence of this plight in the years ahead.

The need for such a program in Mississippi was set forth on numerous occasions but perhaps at no time were the reasons for it outlined in a more convincing manner than at a meeting ten years ago of the Mississippi Conference of Social Work. The state had just spent six million dollars on its new hospital to house its mentally sick people—six million dollars spent on brick and mortar and marble baths to care for many hopelessly ill people who might have developed into useful citizens and not state charges, had preventive measures been started early enough. In outlining the program at that time, it was pointed out that, "The most important measure of prevention of mental disease now needed in Mississippi is a traveling clinic, staffed by a psychiatrist, a psychologist, and a social worker. This clinic would examine, diagnose, and prescribe for all 'problem' children in Mississippi schools who have shown tendencies toward mental disorder. It would also examine and diagnose adults needing this help. Such a clinic would not only pay for itself a thousand fold in saving the state much future expense; far more important, it would prevent incalculable volumes of human misery," they concluded. The ambitious group went so far as to recommend that teacher-training schools should require of every teacher a course in clinical psychology in order that the teachers might help in the work of discovering and caring for children in need of emotional adjustment. Thus you can see that it often takes many years for a stated object to take root and grow into a tangible program.

The Mississippi Child Guidance Clinic is staffed by a psychiatrist, a psychologist, and a social worker, plus a most efficient secretary, and the program has had a good start. However, the needs are tremendous and the surface has hardly been scratched. There are definite limitations on the number of cases we can handle each day, and the procedure is necessarily detailed and often long drawn out. Consequently, it may take some time to realize any considerable improvement in the over-all population.

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*Read before the Section on Public Health and Hygiene at the annual meeting of the Mississippi State Medical Association, Jackson, Miss., May 1944.

Since January first of this year additional centers have been opened and are serving Hattiesburg, Gulfport, Pascagoula, Greenville, Greenwood, Tupelo, Meridian, and the counties adjoining these respective county seats. These mobile clinics are held one day each month. Children with emotional disturbances are referred to these centers, either by private physicians in the local communities, or by the county health officer.

To make sure that the problem is of psychogenic origin and not on a physical basis, a complete physical and serological examination must be made by the referring physician—whether it be the county health officer, or the family physician—before the child is seen by the psychiatrist. Special examination blanks are available and are distributed through the local county health departments or the Jackson Child Guidance Center.

In general, the child guidance can best be defined by describing its functions and operations. Primarily, it is an agency dealing with difficulties of behavior, personality and education in children—an agency which employs all available knowledge in the field of medicine, psychiatry, psychology and the social sciences, to understand better and solve the problems of personality deviations. In short, its primary function is the treatment of the emotionally ill child. Its second function is to give specialized consultation service to social agencies, teachers, juvenile judges, parents, and all others interested in the health and welfare of children. Last but not least, it serves as a teaching center to fellows in psychiatric social work, psychology, and psychiatry. We hope the Mississippi Child Guidance Center in the not too distant future will be able to offer, too, such clinical facilities to students in the specialized field of child psychiatry.

Mental defectives, epileptics, or children suffering with organic neurological diseases are not usually studied in the center. Treatment and diagnostic study is offered to children whose difficulties are on an emotional basis, but who are otherwise normal—children who come within the wide range of what is called normal intelligence. The causitive factors producing the psychological illness may be attributed to the emotional instability in the parent or in the child; to unwholesome influences in the environment; to the educational maladjustment resulting from the demands made upon the child beyond the limits of his intellectual capacity; or to physical handicaps. The immediate reason for referral to the center of misbehavior, specifically, truancy, running away, or bunking out, lying—imaginative or in self defense—stealing, fire setting, night fears and terrors, phobias, feeding problems, thumb sucking, nail biting, stuttering, showoff behavior, rebelling against authority, cruelty, sexual activities, aggressiveness, enuresis, seclusiveness, timidity, or sensitiveness.

Even today, there still hovers an aura of magic and mysticism over manifestations of mental deviations. This is a carry-over from the Middle Ages when the mentally ill and defectives were believed to be possessed by the devil. This belief, of course, has long been disproven. The psychiatrist today knows that all behavior has a cause and that the overt act, like fever in a physical illness, is only a symptom of some inner unresolved conflict. The psychiatrist looks upon behavior objectively and makes an attempt to discover the deep psychological motives of behavior. The following examples illustrate the different motivating factors in the same overt delinquent act. The first is that of Anne, a fourteen-year-old girl who was referred to the Center for stealing. The irate father gave a detailed account of the girl's delinquent behavior. She had repeatedly appropriated the money which was entrusted to her for household expenses. The interviews disclosed the following history: Anne's mother died when she was five years old. The father had moved her from one foster home to another. Anne never remained in a home long enough to establish a positive relationship with the foster mothers. When she was ten years old the father remarried and established a home for her. The stepmother was resentful of Anne's presence in the home and treated her as a stepchild. During the interview, Anne presented a picture of a most unhappy and insecure child. She described with deep feeling the stepmother's rejecting attitude which showed that Anne was unwanted in the home. The only satisfaction that Anne received came from her excellent school achievement and from her devoted classmates. She assured the psychiatrist that she had never stolen outside the home and she could give no explanation of her delinquent behavior, Anne's emotional needs of parental love, closeness, affection and security, had been frustrated by the cruel and selfish stepmother. Anne's primary tendency was to avenge herself, though not consciously, upon the rejecting parent.

In contrast to Anne was Billy, twelve years old, charged with stealing money from a till in an oil station and referred by the probation officer. Billy was a bright and alert youngster, devoted to his widowed mother, whose sole income for herself and three children came from a widow's pension. During the psychiatric interview, Billy gave a description of the poverty in the home and the mother's struggle to stretch the meager income during the last days of the month. With tears in his eyes he said, "I just could not bear to see Mom worry because she had no money to buy milk and food for us. I know it wasn't right to steal but I felt that I just had to help her." Through the center Billy was given an opportunity to earn some money working in a grocery store after school and on Saturdays. Contributing his earnings to the family income and finding an interest in his work, met his needs and gave him personal satisfactions.

As stated above the team of a child guidance center consists of a psychiatrist, a psychologist and psychiatric social worker. Each member of the personnel participates in the treatment and diagnosis of the case. When the study is completed, a staff conference is held during which the component parts of the studies and inferences are discussed and summarized and a plan of treatment is instituted—a plan which makes an attempt to alter the causative factors of the difficulty. This may mean a change of the child's environment, an adjustment in his school curriculum, correction of his physical handicaps, planning for recreational activities, or a change in the destructive pressures and attitudes of the adults in the child's life against which he is reacting. Included in these conferences are visiting teachers, principals, welfare workers, or representatives who have dealt with the child and are familiar with his history and who will share in the administrative responsibility of the treatment plan. Thus, the case conference is not only an invaluable means of promoting necessary coöperation between the different agencies but it also serves as an educational channel for disseminating those concepts and attitudes designated under the term, "mental hygiene."

Let us briefly consider the qualifications and duties of each member of the personnel. The psychiatrist is the director of the clinic. His primary duty is diagnosis and treatment of the child through therapeutic interviews. As disorders of human function are psychogenic as well as organogenic, the psychiatrist must have a knowledge not only of medicine, neurology and psychiatry, but also an understanding of the unconscious mechanisms and dynamic forces which produce inner conflicts and emotional illness. Experience with adult mentally ill patients does not adequately prepare him to deal with children, as a child is not a miniature adult. The child's unacceptable behavior which occasioned his referral to the clinic represents his reactions not only to destructive external influences but also his internal conflicts and guilt feelings. The psychiatrist takes into consideration all these factors and views the child as a total personality, for there is no separation of the human being into body and mind. His attitude towards the child is one of sympathetic understanding and kindly interest. Psychotherapy is carried on directly with the child through the interview.

It is not within the scope of this paper to discuss the various techniques and clinical procedures employed in the treatment of emotionally ill children. One of the methods employed in the psychotherapy of the young patient is child's play, during which the child is given an opportunity to release emotional tensions through the use of dolls and other toys as symbols for mother, siblings, or adults, toward whom the child is hostile. Acting out the specific event that precipitated the fear reaction is an important method of getting rid of tensions arising out of anxiety. The following case illustrates this type of release therapy:

R, aged 7, was referred because of night fears of three months' duration. The mother had consulted a local pediatrician because she was sure that the boy's fears had a basis in some physical illness. The examining pediatrician's report disclosed the child to be in good physical health. He referred the case to us for study and treatment.

R is a charming, attractive little boy, well behaved and mannered. On a Stanford-Binet he was one year advanced in mental age of chronological age and showed a well rounded development, working well with a variety of materials. His IQ is 114. He was seen in six psychiatric sessions. During the psychiatric interviews we learned that the symptoms were precipitated by R's hearing the following frightening story told by a school mate. "A robber man hides in the tree in the park across the street from your house. At night when it is dark he watches for the boys and girls as they pass by and throws daggers at them. He stabbed one boy. Didn't you hear about it?" Returning home from school that day, R recounted the story to his mother who tried to reassure him. That night he refused to sleep alone and for three months one of the parents had to sleep with the child. Frequent night fears disturbed the child's sleep and exhausted the parents. In the psychiatric sessions the therapist supplied the materials and the dramatic situation and encouraged R to develop the plot and keep the play moving. The play reached a dramatic crescendo as R villianously stabbed the doll saying, "I kill you dead!" He was surprised that the therapist endorsed the behavior released in this play. After two sessions, the night fears stopped. R slept alone with the light on. The mother reported that after the sixth interview the patient not only slept alone in the dark bedroom but insisted on sleeping in the guest room which faced the park. This case was chosen for release therapy as it was not complicated by effects of any destructive influences or attitudes in the family relationships to which the child might be reacting pathologically.

The second member of the team is the psychologist, who is usually defined as the individual who has been trained in the knowledge of the mental development and growth of children and in the techniques of learning and teaching processes. Her chief duties, therefore, lie in the fields of mental testing and carrying treatment in cases where the problem centers in school achievement, special difficulties in learning, or in vocational adjustment. She is logically the member of the clinic team to make contacts between the clinic and the schools, to interpret the clinic findings to teachers, and to make suggestions for educational treatment in the school as well as to work with the individual child in the clinic. Such problems as reading difficulties, speech disorders, handicaps due to brain injuries and any anomalies of mental growth, are in her particular province. She also contributes to the complete case study her observations of the social behavior and personality characteristics of the child, his general capacities, and his mental assets and liabilities, and makes recommendations for his adjustment on the basis of these observations. She should be equipped to interpret the psychological study to parents, teachers, and workers, and to advise them in regard to specific means and ways of training children who are handicapped mentally or neurologically. All this of course entails a knowledge of the community resources and personnel, of educational standards and requirements, and of social conditions.

The third member of the team is the psychiatric social worker who must have had educational training in psychiatric social work in direct and responsible working relation with psychiatry. This training includes not only courses in psychiatry but supervised field work in a child guidance clinic or community center. The essential function of the psychiatric social worker is to help patients and relatives work out a way of dealing with social problems arising as a result of psychological maladjustment. The treatment of the parent, especially the mother, is an almost inevitable concomitant of the treatment of the child who is also emotionally dependent upon her. Because the social worker confines her therapy to the parent, she too must have an understanding of the unconscious mechanisms and the dynamic forces which produce anxieties and inner conflicts. To cope successfully with the emotional problems of others the psychiatric social worker must herself be a well adjusted and integrated person. In her therapeutic interviews she must be understanding and sympathetic but must avoid becoming emotionally involved with her client. In addition to working with the parent the psychiatric social worker carries out the recommendations of the psychiatrist and psychologist—be this a change of social adjustment, or finding new recreational outlets for the child. Last, but not least, she acts as a liaison officer between the child guidance clinic and the other social agencies in the community.

The Mississippi State Board of Health has long recognized the importance of coördinating the emotional with the physical needs of the child. In September, 1943, this dream became a realization when the Child Guidance Center was opened as a special division of public health and added to the state-wide program. Since September 1, the program has been active. As previously stated, the child guidance clinic is staffed by a psychiatrist, a psychologist, a psychiatric social worker, and a secretary who is psychiatrically oriented. The scope of the clinic has many ramifications. Primarily, it offers diagnostic study and treatment to children with personality deviations, behavior problems and educational maladjustments. It is a service agency responsible to the community, offering consultation services to juvenile court judges, teachers, welfare workers, and social agencies. Through its staff conferences, the child guidance clinic promotes a more intelligent understanding and a greater awareness of the mental health needs of children on the part of all who deal with children's problems. Last, but not least, it helps parents to understand better their children's needs—needs which must be met if the child is to become a well-adjusted adult—and help these parents to overcome the difficulties of providing these vital needs under the stresses of wartime. Thus, the State Board of Health is wisely giving the Mississippi children the highest priority rating.

Case Report

W. H. ANDERSON, M.D.
Booneville, Miss.

TRIPLETS

Mrs. E. H. Stringer of Iuka is shown with her three babies born at the Northeast Mississippi Hospital on September 9, 1944. They are, from right to left, Wister Bane, who came at 7:20 A. M., a frank breech; William Franklin, at 4:30 P. M., a foot presentation; and Winston Anderson at 4:32 P. M., right elbow presentation. Weights were six pounds eight ounces, six pounds nine ounces, and six pounds two and one-half ounces, respectively. These are the first triplets to be born at the Northeast Mississippi Hospital in its twenty-seven years of operation. The average weight of the mother is 98 to 101 pounds. After the first baby came the mother had no further pains until about three P. M., eight hours later. Just as the anesthetic was begun for the delivery of the last two babies the mother had a fairly hard convulsion. They remained in the hospital sixteen days and are now doing all right. The Carnation Milk Company is furnishing the supplemental milk for the babies without charge.

The Mississippi Doctor

Published monthly at Booneville, Mississippi

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The journal with a vision which encourages a plan of delivering modern medicine to the masses at less cost to the individual and more profit to the practitioner. It champions the community hospital, the hub around which this service must be built.

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Mississippi State Medical Association

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Manuscripts and material for publication under the Mississippi State Medical Association should be received not later than the twentieth of the month preceding publication. Address material to Lawrence W. Long, M.D. Suite 412 Standard Life Building, Jackson, Mississippi

Mississippi can and should have the best all 'round, thoroughly equipped medical school in the United States when all of her 88 community hospitals are put behind it for clinical material. She can also show the way for a prepayment plan for hospital insurance that will be a light unto the feet for other Southern states and other nations of the earth. Let us pray for the vision and the courage to go forward.

Dr. J. A. Ryan of Covington, Ky., president of the Southern Medical Association this year, will preside at the annual meeting in St Louis next month. He was local chairman last year at Cincinnati. Possessed of a great heart, generous and cordial, he will handle the meeting at St. Louis in fine order. We congratulate Mr. Loranz and the members of the Council in going ahead with this meeting. It is no time to freeze new medical information nor even to limit it. It is good that the Southern has had the vision and the courage to go forward. We trust this association will never miss a meeting.

Make your plans to go to the Southern if possible. Last year our own Dr. Harvey Garrison was the able president. Our interest this year should still be warm on account of this honor that was Mississippi's last year.

And now we proceed with the boys of our Half Century Club. Some might have the audacity to say that they are "tired old men." Maybe they are a bit tired, and these boys past seventy and eighty have a right to be, but they are not showing it. Some of our best informed men in other fields are even past eighty years of age. Henry Ford, now 81, goes right along at the head of the greatest industrial plant in the world. Through the love of medicine, the desire to serve and the urge of patriotism, our septuagenarians and octogenarians are holding the lines in civil practice in a manner that deserves any type of medal the government might have or design to bestow upon them.

Our Underwood issue seems to have been strongly approved. We are glad to do our part in paying tribute to a man who has done so much for medicine in his state, in his nation, and in the world. His work, though known and appreciated everywhere, is not yet done. We think that greater fields still await him. Many more years of service in a bigger way for him is our good wish. We wish to thank each contributor who responded so readily and so willingly to this issue.

Next month you may look forward to reading Dr. Underwood's address given before the American Public Health Association in New York.

". . . IN SUCH APT AND GRACIOUS WORDS"

The following represent a few of the various groups from whom fine endorsements have come of our September journal, the Underwood issue.

FROM THE MEDICAL PROFESSION:

The *Mississippi Doctor*
Drs. W. H. and M.P. Anderson, Editors
Booneville, Miss.

Dear Editors,

Congratulations on your Underwood issue. An admirable tribute to a great Mississippian, worthy of all your praise for the invaluable service he has rendered his people, and the homage of the profession for the distinction his example and achievements have shed upon them.

Please listen—I am clapping hands!

Yours sincerely,
R. Matas, New Orleans

For the above we are deeply grateful to Doctor Matas, our appreciated and beloved friend. He is dean of the medical world and the most versatile man living in the world that we know. Though he has passed his fourscore years, he is still active in the practice. Multiplied blessings upon him. For him to take time to write to us, as busy as he always is, bringing this word of good cheer touches us deeply and helps ease the mental and physical strain we are undergoing in being able to publish this journal at all under the circumstances. A thousand blessings upon him.

§

FROM THE DENTAL PROFESSION:

Dear Doctor Anderson:

I received the Underwood issue of the *Mississippi Doctor* this morning and appreciate very much your sending this to me.

I have had occasions to see copies of the *Mississippi Doctor* in the past and have always enjoyed the way our medical profession in this state really puts things over. Your official organ is something I am sure any state medical society would be proud of.

Thank you.

Sincerely yours,
Fayette Williams, D.D.S., Corinth

To Doctor Williams, our neighbor and friend who has served as president of the Mississippi State Dental Association, we acknowledge our thanks.

FROM THE LEGAL PROFESSION:

The *Mississippi Doctor*,
Booneville, Mississippi.
Gentlemen:

Congratulations on your September, 1944, issue of the *Mississippi Doctor.*

From every point of view, it is appropriate and in keeping with righteousness that you have dedicated your September number to Dr. Felix J. Underwood. No man in the history of our state has rendered more outstanding and continuing service for and on behalf of the rank and file of our citizenship.

Again congratulating you, and with every good wish and kind personal regards,

Sincerely yours,
J. H. Culkin, Vicksburg
Member Mississippi State Senate

These letters and others which have come to us give us courage to keep on striving for better medicine for the masses of our state and others.

News and Comment

ST. LOUIS MEETING

The St. Louis meeting of the Southern Medical Association will have more scientific program than last year but not quite so much as in prewar years. Its activities will begin Monday afternoon, November 13, with three clinical sessions running concurrently, all conducted by the St. Louis profession. The clinical sessions will continue until noon Tuesday. Beginning Tuesday afternoon and continuing through Thursday afternoon, November 16, the programs of the twenty sections of the Association will be presented.

In addition to these activities there will be programs by the following organizations meeting conjointly with the Association: American College of Chest Physicians, Southern Chapter; American Society of Tropical Medicine; American Public Health Association, Southern Branch; and National Malaria Society. All meetings and exhibits will be at the Municipal Auditorium, everything under one roof, except the public sessions at night.

In keeping with the spirit of the times there will be no official social activities; no president's reception and ball, no alumni reunion dinners, no fraternity luncheons, no golf or trap-shooting tournaments, and no entertainment features for visiting ladies. Entertainment for physicians this year will consist of a few days of respite from their personal medical responsibilities.

On Tuesday evening there will be a General Public Session featuring the address of the President, Dr. James A. Ryan, of Covington, Kentucky, followed by an address by the President of the American Medical Association, Dr. Herman L. Kretschmer of Chicago, and an address by Major Albert J. Stowe, G.S.C., speaking as personal representative of Major General Clayton Bissell, Assistant Chief of Staff, G-2 (Military Intelligence), War Department, Washington. On Wednesday evening there will be another General Public Session with the theme, "Medicine in the War." Speakers will be top ranking officers of the Army and Navy, and there will be official motion pictures. The Tuesday and Wednesday evening programs will be held in the Gold Room of the headquarters hotel, the Jefferson.

The St. Louis Medical Society is the host, and the local committees from the Society for handling this meeting are functioning splendidly. Dr. E. Vernon Mastin is General Chairman, and the Executive Committee is composed of Dr. Edwin C. Ernst, President of the St. Louis Medical Society, Dr. Neil S. Moore, member of the Council of the Southern Medical Association from Missouri, and Dr. Mastin.

Several of the hotels are already booked to capacity and others are filling up rapidly. For reservations, address Hotel Committee, Southern Medical Association, 901 Syndicate Trust Building, St. Louis 1, Missouri.

DR. JAMES ANDREW RYAN

The blow of the death of the president of the Southern Medical Association, Dr. W. T. Wootton, during his term of office, has been cushioned by the fact that he is succeeded by an outstanding Kentuckian, Dr. James Andrew Ryan of Covington. The annual meeting in Cincinnati last November was a Kentucky meeting, the Campbell-Kenton County Medical Society of northern Kentucky being the host. Dr. Ryan was general chairman for this Cincinnati meeting and at that meeting was elected vice-president of the Association. He became president upon the death of Dr. Wootton on May 2.

Dr. Ryan was graduated from the University of Cincinnati School of Medicine in 1909, entered private practice in Covington in 1912. Graduate work was done by him at Cornell Medical College in 1917, and in the University of Vienna in Austria in 1922. During the first World War, he received an appointment as first lieutenant in the Medical Corps, United States Army, and later served overseas in Cambridge Hospital, Aldershot, England. When he was mustered out of service in 1919, he held the rank of captain.

A very busy practice has not prevented the president from holding a directorship in several successful business enterprises and prominent and time-consuming advisory positions in many lay and medical organizations. In politics he is a Democrat and in religion a Roman Catholic.

A modest and unassuming individual, Dr. Ryan is a man of a great deal of sincerity and ability, who has weathered the storms and vicissitudes of two great wars and their interim, and by his example of industry, and skillful application of his gifts and training, has won a place of high honor among his associates, both medical and lay. He has shown himself most willing to work with the Southern Medical Association and will lend *eclat* to its presidential chair through the remainder of the year and at the St. Louis meeting in November.

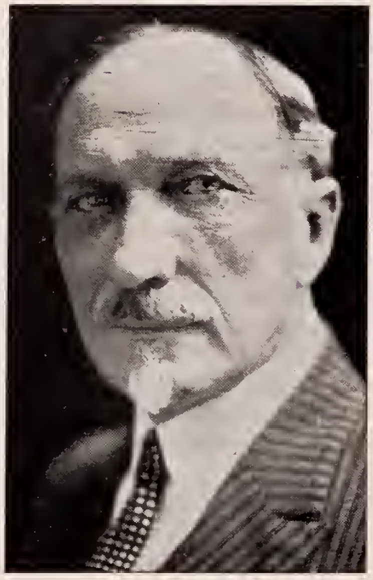
FELLOWSHIPS ANNOUNCED BY COMMONWEALTH FUND

The Department of Graduate Medicine, Tulane University of Louisiana School of Medicine, 1430 Tulane Avenue, New Orleans 13, Louisiana, is prepared to accept applications for registration in the following intensive courses of instruction:

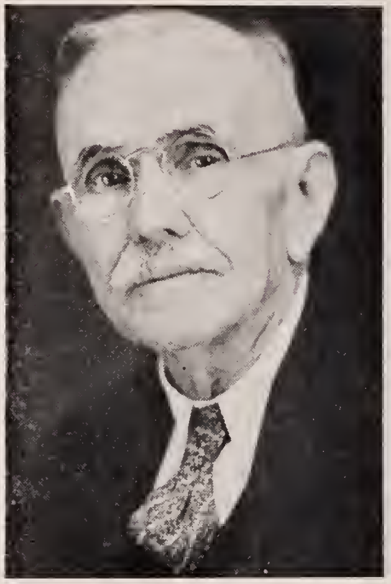
Medicine	Nov. 6-11, 1944
Pediatrics	Dec. 11-15, 1944
Obstetrics and Gynecology	Jan. 15-19, 1945

A limited number of fellowships for these courses are offered by The Commonwealth Fund, 41 E. 57th Street, New York 22, New York, to physicians who do general practice in rural areas in Mississippi. Fellowship awards are made on the basis of information furnished by the applicant on forms obtainable from The Commonwealth Fund, and after a personal interview with a member of the Fund staff. Preference will be given to graduates of Class A medical schools and to those under fifty-five years of age. A fellowship entitles the recipient to reimbursement of tuition cost, necessary travel expense to and from New Orleans, and a stipend for each of the courses of instruction listed above.

With the Half Century Club



DR. JOHN DARRINGTON



DR. W. C. WALKER

Dr. John Darrington of Yazoo City, a native of Mississippi, was born near Natchez in 1870. He graduated from Tulane in 1892 and moved to Yazoo County and began the practice of medicine the same year. He removed an appendix in the "nineties" and reported it, the first appendectomy performed in the state so far as there is a record. He also did quite a bit of stomach and gallbladder surgery in the nineties and established one of the very first private hospitals in the state in 1898. He was a charter member of the American College of Surgeons from Mississippi. He resigned a few years ago when the association adopted the policy of admitting Negroes to the association. He is chairman of the Public Service Commission of Yazoo City which operates the light and water plants. On this commission he has served forty years. He has served as president of the Mississippi State Medical Association, the Southeastern Surgical Congress, the Mid-South Postgraduate Medical Assembly and held many other high honors at the hands of his fellow doctors.

Dr. John answered present at the organization of the Half Century Club in Jackson at the meeting in May. He was full of good cheer and optimism with his face turned toward the future. It does not make so much difference how many years Dr. John Darrington has lived nor the honors he has held, but what he is within, the bigness of his heart, the warmth of his soul, and the strength of his intellect, make him dear to the fraternity. He has not only practiced fifty-two years in length of time, but he has lived well and served generously. His life has been big in volume.

Dr. John loves his dogs, loves the chase whether it be by his fox hounds or his beagles. The kindness of his heart may be gauged by the love of dogs and children for him.

At the last meeting in Jackson Dr. LeRoy Wilkins selected him to deliver the annual oration. The response of the audience evidenced his popularity with the profession and his ability as an orator.

In everyday life he enters into the joys and pleasures, the heartaches and sympathies of his people.

Dr. John Darrington's length of years has been well challenged by volume of life and devotion to duty in service.

DR. WILLIAM CLEMENT WALKER

Dr. W. C. Walker of Houlka (the hub of the universe), did not get to attend the meeting of the Half Century Club in Jackson in May, but he asks that he be listed as a member who is very much a part of it. Dr. Walker was born in Houston, Miss., June 14, 1859. He graduated from Vanderbilt University Medical School in 1880 and began practice in 1881 in his native county. He has practiced there continuously since then except for a short while during World War I when he supplied for Dr. John A. Harris at Webb, Miss. He kept in active practice straight along for fifty-nine years, over fifty years of which time he lived in Houlka. He believes in Houlka and Houka believes in him. There also Dr. Hood and he are friends as steadfast as David and Jonathan.

Dr. Walker attends the Northeast Mississippi Thirteen Counties Society almost every meeting. For a time he was blind, but now he sees again. He had an operation for cataract recently and he can see well enough to recognize people and to get about quite well. His mental vision has never lost its acuteness.

Dr. Walker has one son practicing medicine, Dr. John C. Walker of Jackson, Miss., and one grandson, J. C. Walker, Jr., who is in the service. Four sons are registered pharmacists. Mrs. Walker passed away about twenty years ago.

When he celebrated his eightieth birthday he had the Northeast Mississippi Thirteen Counties Medical Society meet in Houka, and had Governor Hugh White as a special guest. The occasion was a big one. He says that this society is the best in the world because he helped organize it, and *The Mississippi Doctor* is the best medical journal he knows of because Mrs. Anderson is such a good editor. He gives hearty approval to the Woman's Auxiliary because he is an honorary member for life.

He is very proud of Dr. Felix Underwood because he had a hand in helping to raise him. Dr. Walker's oratory is outstanding. When called upon to pay a tribute to the ladies, he always has an easy flow of eloquence, appropriate to the occasion, inspiring and entertaining, mingled with wit, learning and wisdom.

We all love Dr. W. C. Walker for what he is and for the fine medical spirit that emanates from his noble heart and medical soul. May his eighty-six years grow to a hundred.

Dr. Charlie Murry, of Ripley, attended the graduation of his son, Dr. Charlie Miller Murry, in Philadelphia last week. Dr. Charlie graduated from Jefferson Medical College in 1890 and now his son graduates from the same school fifty-four years later. His father, Dr. John Y. Murry, graduated from Jefferson nearly a hundred years ago. He began practice in Ripley in 1849. Dr. Milton Adams, who is making a fine record in Memphis as a plastic surgeon, hails from this family, being a nephew of Dr. Charlie. Dr. Murry is a member of the Half Century Club, having been in active practice 54 years.

FROM DR. HARVEY GARRISON:

In referring to the first meeting of the Half Century Club in Jackson last May, Dr. Harvey F. Garrison, a guest with the group, opines:

"This is one of the most inspiring meetings I have ever had the pleasure to attend. To have the privilege of sitting around a table with men, such as were present at that meeting, is a great deal like sitting under the drippings from the sanctuary. For one who has not had quite as much experience as those who are entitled to be members of that club, I feel that, notwithstanding this fact, I can appreciate the tremendous amount of good these men have done and accomplished through the history of their professional career. When one has experienced a life-time attending to the diseases of human beings and giving them the benefit of his training and experience in alleviating the sufferings that befall the human race, it would seem that they deserve the gratitude of not only those whom they have helped, but all others, and particularly those of the medical profession who can most surely appreciate the value of such men and their experience.

"In some circles there has grown to be a disposition to discount the value of the older men of the profession. I feel that I can truthfully say the older I get the more respect I have for the great value of the experience of the older men in the profession. I would not in any sense discount or take from the ambitious young man his enthusiasm for work, but I would remind him and others that he will find as he grows older he will also become better acquainted with the need for experience, as well as his training to be able to solve the problems with which he will be confronted in his daily practice. Viewing it from this angle it is a great comfort to be associated with other men to whom one can turn for counsel with regard to the daily problems confronting the medical man.

"The older men will appreciate the club meetings and the younger men will learn to value these valiant soldiers and their long years of experience in the practice of medicine."

Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—James G. Thompson, Jackson.

Ear, Nose and Throat—Edley Jones, Vicksburg.

Obstetrics and Gynecology—J. F. Lucas, Greenwood.

Orthopedics—Thomas H. Blake, Jackson.

Pathology and Clinical Pathology—John C. Henthorne, Vicksburg.

Pediatrics—Harvey F. Garrison, Jackson.

Public Health—Felix J. Underwood, Jackson.

Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

PEDIATRICS

MYOCARDITIS IN CHILDREN: Otto Saphir, M.D.: Simon A, Wile, M.D., and Irving M. Reingold, M.D. — American Journal, April, 1944.

The authors state that in "1,420 autopsies on children between the ages of 8 days and 16 years 97 instances of myocarditis were observed, an incidence of 6.83 per cent. This disease was encountered 150 times in 3,712 autopsies performed on adults during the same period, an incidence of 4.05 per cent. These figures represent myocarditis seen in a general pediatric hospital."

Among the 97 cases of myocarditis, there was 1 in which the condition was diagnosed as post-diphtheritic inflammation of the myocardium. Myocarditis was associated with meningitis in 4 cases, with poliomyelitis in 7, with broncho-pneumonia in 12, with lobar pneumonia in 3 and nephritis in 3. Abscesses in the myocardium, associated with various infectious diseases and various portals of entry, were present in 16 instances. Myocarditis associated with subacute bacterial endocarditis, 7 times. There were 13 instances of a "rheumatic type" of myocarditis. Rheumatic was present 19 times, isolated myocarditis 3 times and myocarditis in tuberculosis 4 times.

They say that "fetal myocarditis, with the exception of myocarditis in congenital syphilis, if it occurs at all is extremely rare." It is stated that the essential myocardial lesion in diphtheria is parenchymatous hyaline degeneration or necrosis. It is questionable whether the latter should be considered true myocarditis. They say that "myocarditis in measles is rarely encountered; nor does myocarditis occur frequently in mumps, whooping cough, smallpox or varicella. The authors say that it seems that inflammatory myocardial damage occurs much more often in scarlet fever than has been heretofore believed. Perhaps a parallel statement would be true for a number of other contagious diseases if further studies were made of the myocardium in such conditions. Myocarditis is also observed in epidemic meningitis and poliomyelitis. In the latter disease it seems to occur more frequently than is generally accepted. In bronchopneumonia and lobar pneumonia it is occasionally encountered.

It is stated that isolated myocarditis occasionally occurs in children who have no other disease that may be considered as the source of the myocarditis. Occasionally this form of myocarditis has been found associated with exanthematous diseases. It may cause sudden death in children who had been apparently healthy and in whom progressive myocardial weakness developed, more or less quickly.

Myocarditis in bacterial and subacute bacterial endocarditis is often encountered and rarely diagnosed clinically. in rheumatic endocarditis the "rheumatic type" of endocarditis myocarditis occurs frequently. This is the only type of myocarditis recognized and diagnosed clinically with any degree of frequency.

They say that myocardial damage in uremia is rare and may be explained by an extension of uremic pericarditis into the adjacent myocardium. Whatever may have caused the nephritis may cause the myocarditis. Myocarditis in trichinosis, blastomycosis and virus, rickettsial and various other diseases is also mentioned.

The authors state that clinically, myocarditis may be suspected if during the course of an infectious disease a child suddenly becomes worse and begins to fail without apparent cause. Tachycardia out of proportion to the temperature, particularly if accompanied by cyanosis, is an early sign that may direct attention to the myocardium. Cardiac enlargement is frequently present, and the blood pressure is usually low. The electrocardiogram sometimes reveals significant changes."

In 97 instances of myocarditis evidence of heart failure was noted 32 times. In the vast majority of these cases a diagnosis of rheumatic heart disease was made. Sudden death of patients with myocarditis was not unusual; 9 out of 60 children died suddenly.

From their study it is evident that myocardial damage in children may and does occur in diseases other than rheumatic fever and diphtheria. The incidence of myocarditis in their series (6.83) indicates clearly that the possible occurrence of myocarditis during the course of an infectious disease must be borne in mind. The possibility of myocarditis having once been considered, further investigation may reveal additional confirmatory evidence. They say that perhaps the relatively high incidence of the clinical diagnosis of myocarditis for patients with rheumatic heart disease can be explained by the fact that it is generally accepted that myocarditis often occurs in patients with rheumatic heart disease.

The authors say that "they suspect, especially from their experience with myocarditis in poliomyelitis, that myocarditis in general would be found frequently and would no longer be regarded as a rare condition if the myocardium were carefully examined histologically for the purpose of ruling out or substantiating the presence of inflammatory disease."

COMMENT

Myocarditis like many other diseases in children, no doubt is frequently overlooked or not found at all. It has been my experience that one should suspect the possibility or presence of myocarditis as a complication in many cases mentioned in this article. It frequently occurs following scarlet fever and many other infectious diseases of children.

This is a very splendid article and I commend it to the medical profession of our state.

H. F. G.

State Board of Health

Felix J. Underwood, M. D.

MATERNAL MORTALITY IN MISSISSIPPI IN 1943

by

Virginia Howard, M.D., Director
Maternal and Child Health

There has again been a decline in the maternal mortality in Mississippi. The rate for 1943 is 3.9 per 1,000 live births, the white rate being 2.4 and the colored rate 5.2. The following table gives comparative figures for the last five years and reflects a measure of the progress which has been achieved in saving mothers' lives.

Maternal Mortality Rates* in Mississippi for Last Five Years

	T	W	C
1939	5.9	4.1	7.4
1940	6.2	4.6	7.5
1941	5.4	3.8	6.6
1942	4.4	3.0	5.5
1943	3.4	2.4	5.2

*Per 1,000 live births

No 1943 maternal mortality rates for the United States as a whole are as yet available for comparison. However, the 1942 rate for the country was 2.6, the white rate being 2.2 and the colored rate 5.4.

The general trend for maternal mortality in Mississippi, as in the country as a whole, has been steadily downward for both white and negro. The 1943 rate was less than one-third of the rate in 1930. The negro rate in 1943 is the same as the white rate in 1935. Both of these represent substantial savings of life.

Maternal Deaths in Mississippi for Last Five Years

	T	W	C
1929	311	97	214
1940	327	106	221
1941	293	93	200
1942	248	77	171
1943	233	66	167

In 1943 the number of women dying in Mississippi of causes directly due to pregnancy and childbirth were 233, of which 66 were white and 167 negro. This is the lowest number of maternal deaths to occur in Mississippi since 1922 for both white and negro.

Although in 1943 there was an increase

of 3,338 births over the number in 1942, there was a decrease of 15 maternal deaths during the year. The largest single cause of death in Mississippi continued to be toxemias, although for the United States as a whole infection is the leading cause.

The number of deaths from hemorrhage (42) slightly exceeded the number of deaths from infection (39). It is interesting to note that although the deaths from hemorrhage during or after childbirth were evenly divided between white and negro, the deaths from infection were five times as high among the negro as among the white.

Maternal Deaths from Each Cause in Mississippi, 1943

	T	W	C
Infection	39	6	33
Toxemias	86	22	64
Hemorrhage, trauma, shock	42	17	25
Other and unspecified causes	66	21	45

The following possible conclusions may be drawn from these statistical facts. First and most important, Mississippi mothers still need to visit their physicians regularly for prenatal care. This is indicated by the fact that toxemias lead among the causes of maternal death in Mississippi. Many women do not realize the importance of the regular attention of a physician during pregnancy.

Second, the vastly higher number of deaths from infection among the negro mothers is a reflection of the fact that most of these deliveries take place in insanitary surroundings attended by non-medical persons who sometimes engage in unsafe practices. It should be pointed out, however, that in 1942 the negro maternal mortality rate in Mississippi was lower than in such states as Michigan, New York and Ohio and that it was lower than the national rate for negro maternal deaths.

Physicians, health departments, hospitals and nurses, in spite of their crowded days and heavy wartime duties, have been able to maintain high standards of medical service and maternal care. This has been reflected in a lowering death rate during 1943.

* * * * *

LABORATORY SERVICE, JAN.-JUNE, 1944

The total number of specimens examined by the State Hygenic Laboratory during the semi-annual period January-June, 1944, was 180,365, according to Dr. H. C. Ricks, director. This was a decrease of 86,683 from the 267,048 specimens examined during the previous semi-annual period. Of this decrease 50,857 specimens may be accounted for by the reduction in the number of specimens examined from regisrants of Selective Service. Specimens of blood and spinal fluid from this source decreased from 61,823 during the previous semi-annual period to 10,966. The reason for this decrease is that the armed services made arrangements to examine blood specimens on all registrants at the time they reported for their preinduction physical examination.

The reduction in specimens examined does not mean that the amount of work being done by the laboratory personnel has been lessened. There has been a marked increase in the number of blood specimens submitted for serological test for diagnosis of syphilis for which a quantitative complement fixation examination was requested. This procedure has been particularly apparent in the specimens submitted by the three public health treatment centers. Many physicians are now requesting quantitative examinations of specimens from patients under active treatment, as well as specimens collected from patients who have completed treatment.

There seems to be an increase in epidemiological investigations of suspected or diagnosed typhoid cases. This has cause a marked increase in the amount of laboratory work required on the individual specimen. The total number of feces specimens examined during the period was 4,076 compared to 4,310 specimens during the previous semi-annual period. Of the 4,076 specimens examined, 101 were positive for typhoid. For the preceding half-year, the positives numbered 206. The urine specimens submitted for culture during the period amounted to a total of 3,682 with 31 positive for typhoid, as compared with 3,771 for the previous period with 60 positive.

Blood specimens submitted for culture and agglutination tests decreased from 2,286 during the previous period, with 44 positive typhoid cultures, 73 positive agglutinations for proteus X19 or typhus fever, and 16 positive agglutinations for tularemia, to 1,835 specimens during the present period with 16 positive typhoid cultures, 54 agglutinations for proteus X19, and 67 positive agglutinations for tularemia.

One bacteriologist was awarded a two

weeks' course of study at the University of Iowa under the instruction of Dr. Irving H. Borts for the study of brucellosis. Equipment for the culture and isolation of **Brucella abortus** has been installed and placed in use.

The clinical laboratory advisory service has been maintained during the period. The training center has been transferred from the Tulane University Medical School to the laboratories of the Mercy Hospital and the Vicksburg Hospital of Vicksburg, Mississippi. During the period five technicians from clinic and hospital laboratories in Mississippi have been awarded scholarships of four weeks each.

PREVALENCE OF COMMUNICABLE DISEASES IN MISSISSIPPI

	July 1944	*July 1943*	*July 5 yr. av.*
Acute Poliomyelitis	22	2	14.8
Bacillary dysentery	2251	2271	2441.0
Dengue	0	0	.2
Diptheria	25	15	18.8
Influenza	1042	1093	973.0
Measles	367	209	344.2
Meningococcus meningitis	9	13	5.6
Other forms meningitis	3	2	1.6
Pellagra	198	319	347.0
Pneumonia	490	415	386.0
Pulmonary tuberculosis	160	147	126.8
Scarlet fever	10	16	14.4
Smallpox	0	1	.2
Tularemia	2	3	3.0
Typhoid fever	19	42	35.2
Typhus fever	19	13	8.6
Undulant fever	6	1	2.0
Whooping cough	1236	1220	979.8

	Aug. 1944	Aug. 1943	Aug. 5 yr. avg.
Acute poliomyelitis	33	9	19.0
Bacillary dysentery	1568	1548	1383.2
Dengue	0	0	0.0
Diphtheria	41	26	33.2
Influenza	995	1387	1034.0
Measles	189	205	204.8
Meningococcus meningitis	9	7	5.2
Other forms meningitis	3	2	2.2
Pellagra	257	274	321.0
Pneumonia	453	511	393.3
Pulmonary tuberculosis	117	137	133.8
Scarlet fever	30	28	26.4
Smallpox	0	0	0.0
Tularemia	4	2	3.5
Typhoid fever	27	33	42.8
Typhus fever	27	20	14.4
Undulant fever	7	7	5.8
Whooping cough	966	1076	775.8

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The members of the Northeast Mississippi Thirteen Counties Auxiliary met for a most pleasant quarterly session in September at the home of Mrs. W. N. Reed of Amory. A delightful luncheon, at which Mrs. I. P. Burdine, Mrs. C. E. Boyd, Mrs. Boozer and Mrs. M. Q.. Ewing were co-hostesses, preceded a social period and business meeting. Following a book review given by Mrs. O. C. Webb of Amory and two musical numbers by Mrs. J. H. Goodrich and Mrs. B. C. Jones, the president, Mrs. J. Rice Williams of Houston, presented the past-presidents of the auxiliary in review. In their honor was highlighted the progress and work done by the auxiliary since its organization. Mrs. V. B. Philpot of Tupelo, Mrs. Stanley Hill of Corinth and Mrs. W. H. Cleveland of Tupelo each made an excellent contribution.

Those present who have served the organization as president included Mrs. Cleveland, Mrs. L. L. McDougal, Mrs. E. K. Guinn, Mrs. Stanley Hill and Mrs. V. B. Philpot.

Mrs. J. K. Avent of Grenada, wife of the president-elect of the Mississippi State Medical Association, was a welcome guest.

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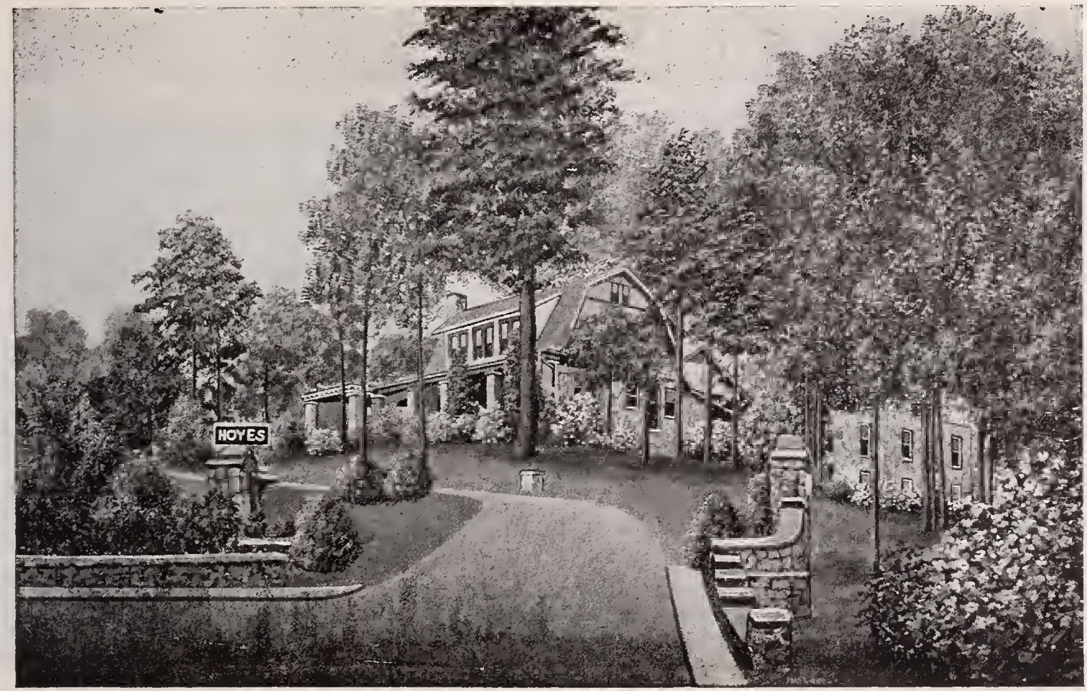

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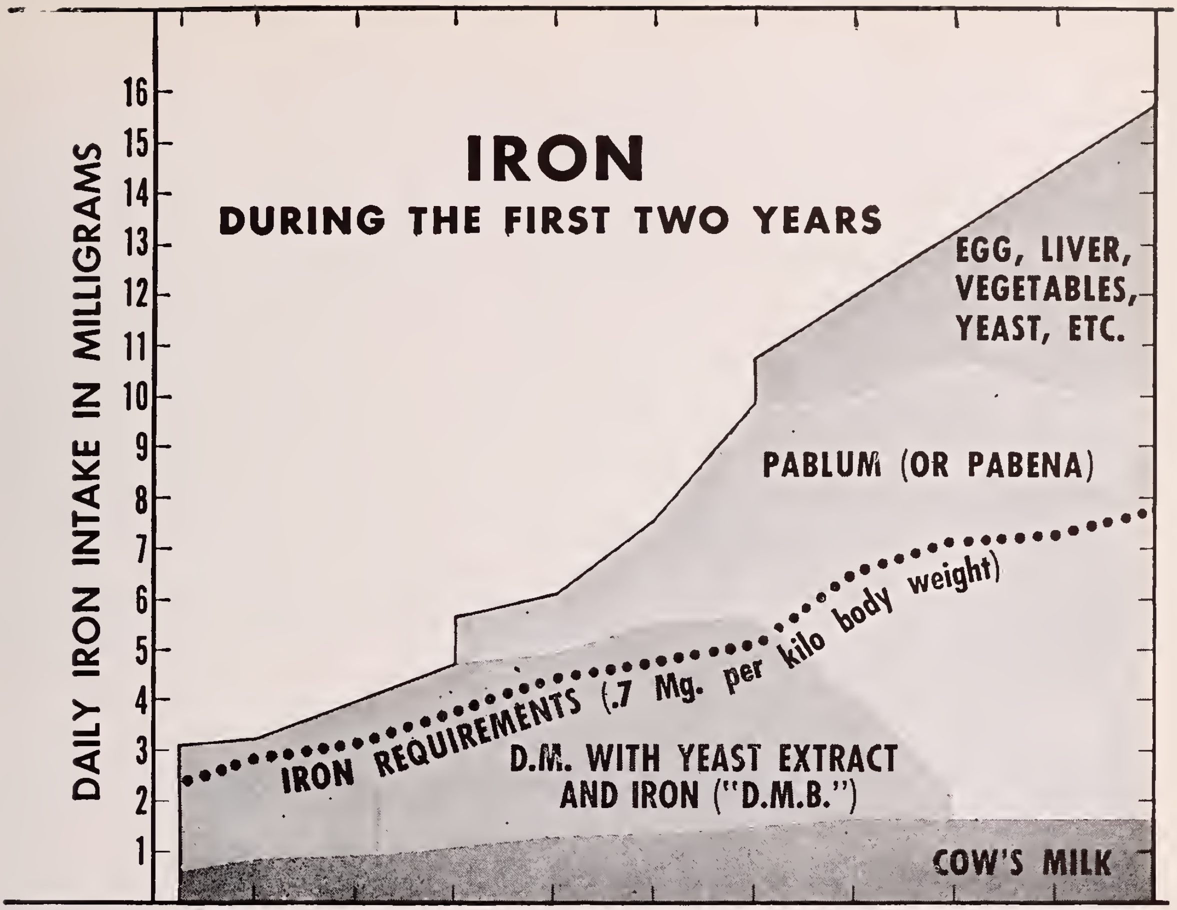

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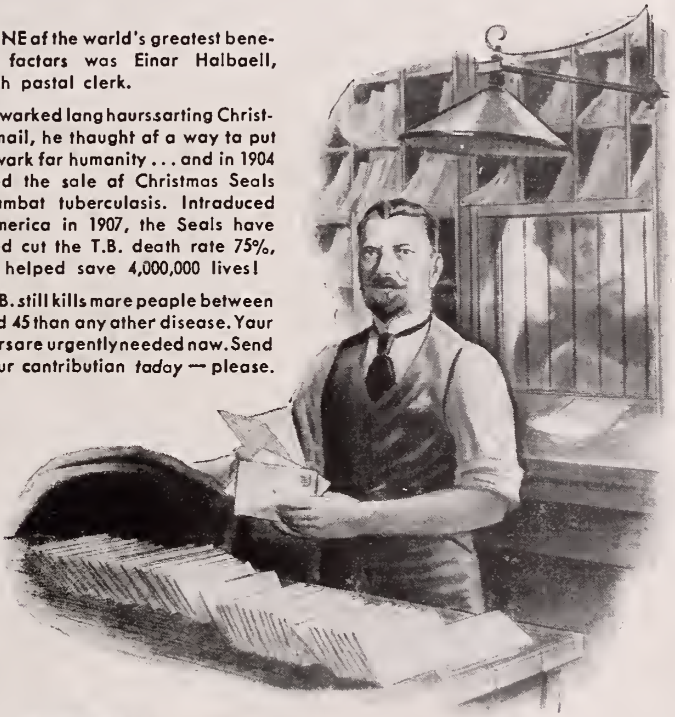

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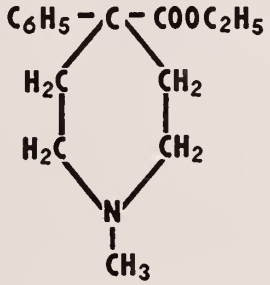

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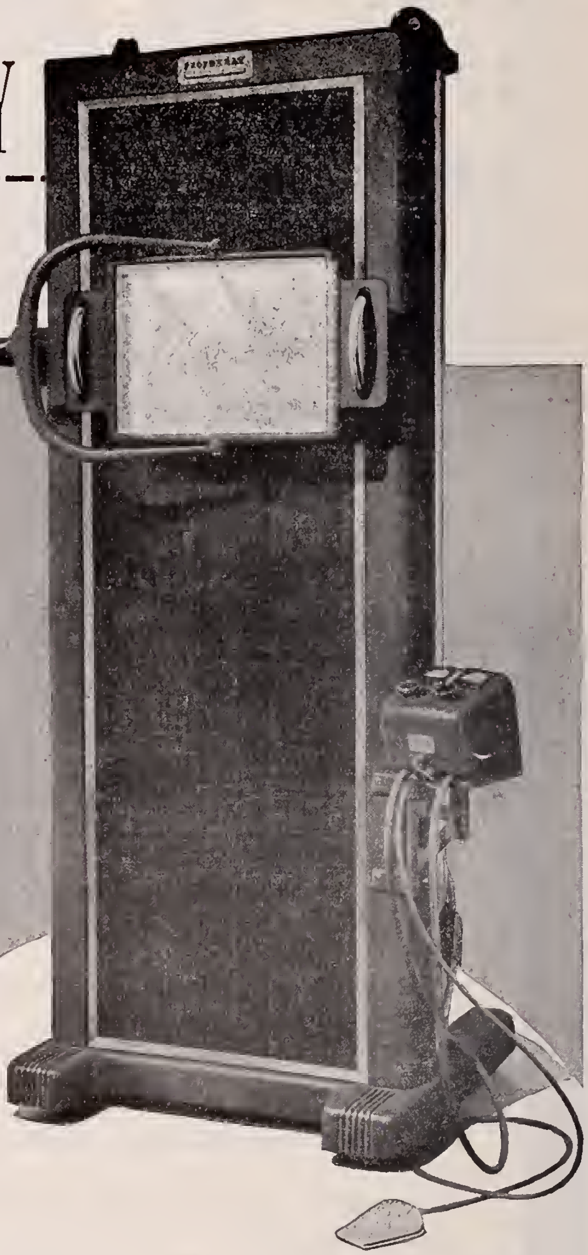

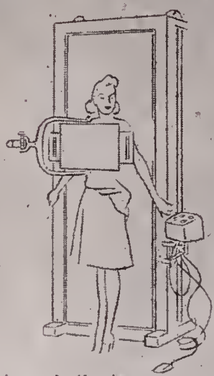

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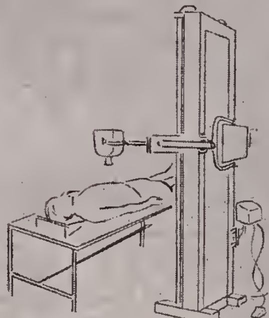

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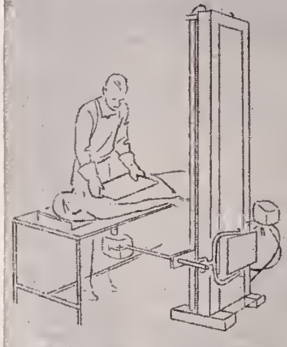

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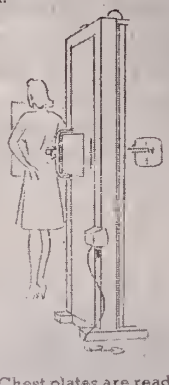

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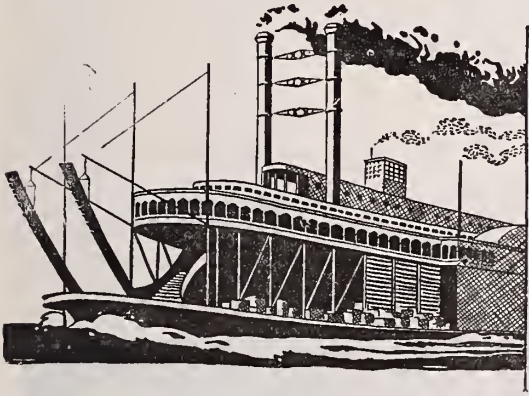

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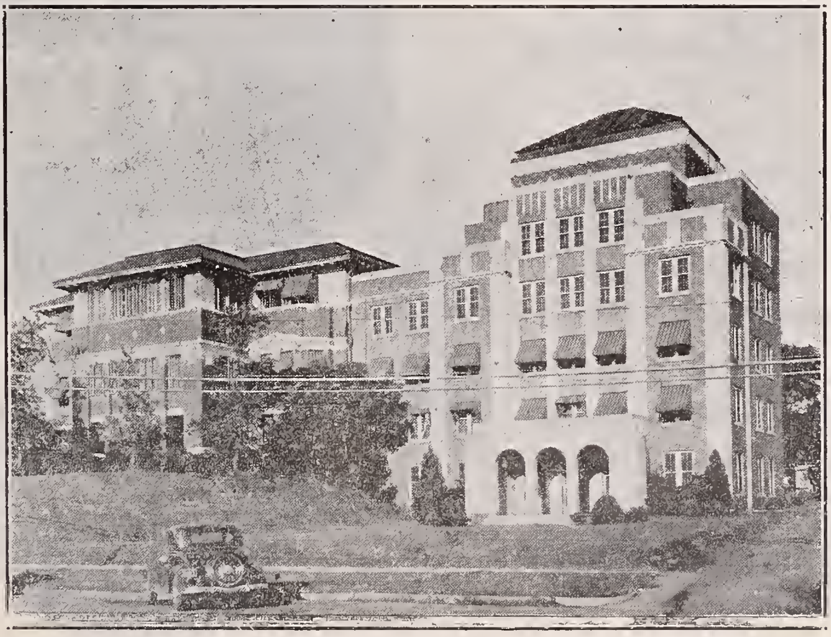

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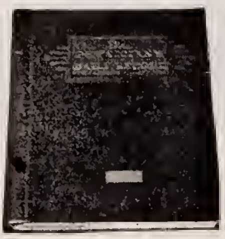

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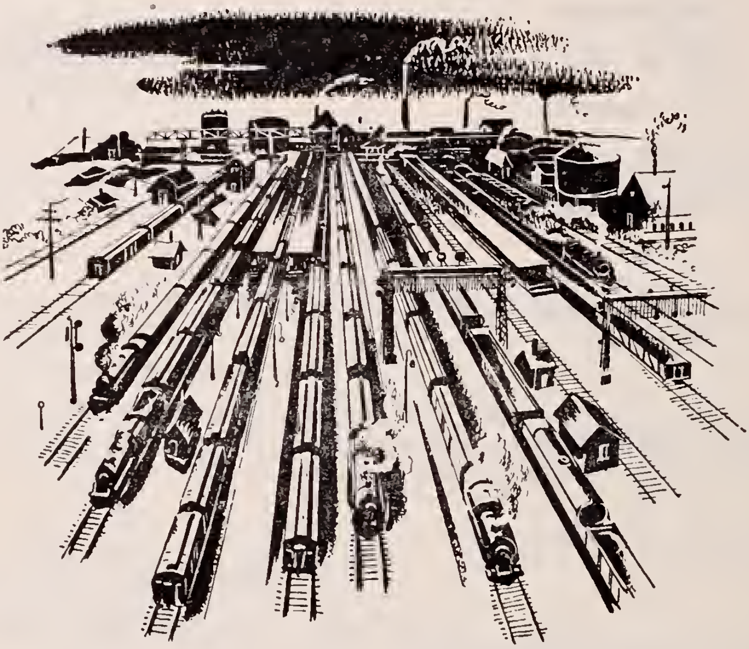

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The Doctor and the Care of the Heart*

WILLIAM CALVERT CHANEY, M.D., M.S. in Medicine, F.A.C.P.

Memphis, Tenn.

THE SUBJECT, of course, is intended to refer to that disease which is the mass slayer of the medical profession, coronary heart disease. Nearly all articles dealing with this condition discuss the diagnosis and treatment and the question of prevention is passed over by a few general remarks, because up to the present time the exact cause is certainly not known.

It is the purpose of this paper to consider many probable factors that may directly or indirectly bring about coronary heart disease and to consider ways and means by which we may avoid these destructive pathologic changes. We should remember that oftentimes we obtain brilliant results in the practice of medicine by making use of a lot of minor therapeutic measures, any one of which may seem quite insignificant when considered by itself.

First of all, disease of the coronary arteries is not just a problem of old age. It has occurred at the age of eighteen. Many cases are recorded in men in their thirties and the mortality rate reaches its peak at the age of fifty-six.

While the disease occurs six times more often in men than in women, and four times more often in the highly successful, hard working business executives, doctors and other professional men, than in farmers and laborers, we can not change the order of things, but we can consider many ways that the professional man and the high pressure business man may change their way of living in order to avoid this dreaded disease.

There are many predisposing factors or diseases that should now be considered. They may be listed as follows: 1) obesity, 2) hypertension, 3) diabetes, 4) gout, and 5) hypothyroidism.

As Smith has said: "It requires more work to carry an excessive amount of fat than it does to carry the same amount of cement, because the patient does not have to nourish the cement, but does have to nourish the fat." The advice that is given as to how to live to a ripe old age probably applies equally well in trying to avoid coronary disease. It is: Always be able to wear the same size trousers you wore when you were twenty.

Tragedies of the coronary arteries occur very frequently in people who have high blood pressure, diabetes and gout. A great deal can be done with the diabetic and the man with gout by making him stick faithfully to his diet and the medication prescribed. The man who has a moderately severe hypertension should not only be treated for that disease, but should be made to carry out the rest program that is necessary in the treatment of a mild case of coronary disease.

Quite frequently in coronary disease and almost always in hypothyroidism the blood cholesterol levels may be quite high. Might not it be a wise preventive measure to give enough thyroid tablets to the person who is deficient in thyroid in order to reduce his blood cholesterol? One is, however, not impressed with the frequent occurrence of angina pectoris nor other evidence of coronary trouble in persons who are decidedly hypothyroid.

Because of the studies made in which there is a definite increase in the blood cholesterol in cases of disease of the coronary arteries it might not be a bad idea to suggest that the doctor, who is trying to keep his arteries as normal as possible, go on a low cholesterol, low fat diet especially if he needs to reduce his weight. This suggestion may be very good, but the objection will at once be raised, that no one wants to spend the rest of his life on a diet in which all the "good things" we enjoy have been left out. It would certainly not be necessary to hue the line too strictly in following such a diet, but in a general way many of the fats could be left out very easily and whenever a fat is desired one could choose a vegetable fat instead of an animal fat which seems to be more harmful.

The next step in our program of avoiding heart trouble may lead to a lot of discussion and differences of opinion. It is a consideration of the avoidance of habits and mental attitudes that may bring about vasoconstriction, and outlining a program of living that may encourage vasodilatation.

Under vasoconstriction should be included 1) hard work with great responsibility, 2) smoking, 3) some of the emotions, such as anger, fear, sorrow, hate.

Under vasodilators we should include 1)

physiologic rest, 2) the drugs listed as vasodilators, 3) alcohol, 4) emotions that go along with play and amusement such as laughter.

In discussion of coronary disease we are told that an attack may come on after an excitement, such as a football game or a prize fight. In most of these cases, however, such excitement is just the last straw that is needed to initiate an attack.

In taking a careful history of an attack of coronary disease, the triad of very hard work, great responsibility with the necessary worry, and heavy smoking occur too frequently to be just the average way of life. Facial pallor is very noticeable after great fatigue, after worry, anger, fear and also after heavy smoking. More and more evidence is being brought out in medical literature to show that smoking is undoubtedly a contributing factor in certain heart diseases or at least in arterial disease in general.

Under the list of vasodilators we have included the greatest single factor in the prevention of coronary disease and that is rest. When we are lying in bed our heart is required to pump five quarts of blood every minute, but when we are walking the work thrown upon the heart is multiplied five times, since with this amount of effort, the heart must pump twenty-five quarts of blood each minute. If one learns to read in bed and acquires the art of eating breakfast in bed, ten hours of the twenty-four may be spent in a horizontal position without giving the impression of laziness. As one gets older, a noon-day nap is rule number one in planning to live to be a hundred. Two vacations a year are much to be preferred to one and even then there are enough work hours left for the doctor to meet the requirements of those who have studied the problem of the optimal number of work-hours each week to maintain efficiency.

Probably this is no place to discuss the nitrites or the other drugs that are supposed to produce vasodilatation. Our program of avoiding coronary disease must be carried out over a period of years and no one wants to take pills even for a month or two. If hypertension is a predisposing factor, then treatment directed toward this disease would be very advisable.

I know of one doctor who is in his late sixties who takes a dose of nicotinic acid every day. His argument is that he feels very much better when he takes it and besides he thinks that the intense flushing or redness of the skin which it produces may not be limited to the skin, but may even produce general arterial dilatation. He is certainly justified in carrying out this treatment in which he has great faith. Whether his ideas are correct, it is for the future to decide.

Alcohol or whiskey has been used for years in the treatment of attacks of angina pectoris. While its action in relieving an attack of angina pectoris is slower than nitroglycerine, nevertheless its action is more sustained.

Whether a physician who has passed the age of forty or forty-five should be encouraged to take a small amount of whiskey each day for the purpose of producing vasodilatation and physical relaxation is certainly open to question. He may live for many years and gradually get the habit of taking too much in spite of the often quoted saying that you can't teach an old dog new tricks.

Just what effect acute infections, especially those in the upper respiratory tract, have upon the arterial system in the production of coronary disease can not be said at this time. It certainly would be fine, however, if the doctor would take the advice he gives to others and go to bed whenever he has an acute cold or severe sore throat.

When a twenty-six-year-old man drops over dead from the occlusion of a large coronary artery because of atherosclerosis, it is high time for the medical profession to look for other explanations for this disease rather than to consider it principally as one of the many tragedies that may come upon man when he gets older. In the meantime, while the etiology is being sought, it certainly will do no harm for the physician to learn how to relax at times, and then to work at a slower pace as he gets older.

When one considers the millions of years that man has needed to eliminate one imperfection after another until he has reached his present state, his nervous system is certainly geared up more in harmony with the ox-cart or the horse and wagon than with the automobile or the airplane.

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Subtotal Gastric Resection for Benign Lesions: Indications and Results*

R. L. SANDERS M.D.

Memphis, Tennessee

Subtotal resection of the stomach for benign lesions, or, more particularly, for gastric and duodenal ulcer, has now been sufficiently well tried to permit an estimate of its efficacy, its proper extent, and the indications for its use. With added experience, we are gradually extending the application of the procedure, and further time will be required before we can say what the results will be in every type of case wherein it is employed. From evidence already available, however, we have every reason to believe that we shall not be disappointed. In this discussion, we shall present the newer conception of the indications for gastric resection and shall review the results of our private cases.

GASTRIC ULCER

It is an accepted fact that penetrating, hemorrhagic and obstructive ulcers of the stomach, and those associated with extensive gastritis are strictly surgical. Such lesions are resistant to even the most vigorous medical treatment, and operation is indicated as soon as the patient can be adequately prepared. Aside from these, however, there is a comparatively large group of uncomplicated gastric ulcers concerning which one must decide between medical and surgical management.

Our attitude toward this group is changing. Heretofore, we have been prone to temporize with medical treatment unless there appeared to be a possibility of malignancy. In theory this is a rational attitude; in practice, it may be a dangerous one. In the first place, the decision as to the possibility of a malignant lesion has been based upon evidence of healing after a period of medical treatment. Experience has shown that such evidence is by no means reliable. By far the majority of carcinomas will respond temporarily to medical management. Moreover, a considerable number of carcinomas present the typical clinical picture of ulcer. The classical ulcer symptoms, the youthful age of the patient, elevated stomach acids, and a roentgenographic picture of a small lesion may also apply to carcinoma. In reviewing our cases of gastric cancer, we found that a preoperative diagnosis of ulcer was made in 22 per cent, and in a few others a distinction could not be made between ulcer and carcinoma prior to operation.

The location of the lesion is not a definite criterion as to its benign or malignant nature. With few exceptions, those situated in the pyloric or antral regions and on the greater curvature are malignant, whereas those in the midportion or proximal half and on the lesser curvature of the stomach are more often benign. Even in the latter areas, however, the potentiality of cancer is by no means negligible; at least one-third of the lesions so situated are malignant.

Another factor to be taken into consideration in deciding between medical and surgical treatment of gastric ulcer is the symptomatic relief to be obtained by each method. Because of the very nature of the disease, faithful adherence to a medical regimen and frequent roentgenographic studies over a long period are imperative if one would prevent more serious developments. Such a course is feasible in a comparatively small number of cases. Even so, cure of the ulcer is by no means assured. Statistics indicate that medical treatment results in cure in less than one-half of these cases, that in a considerable number the symptoms are relieved only by uninterrupted medical treatment, and that approximately 10 per cent of the patients ultimately come to operation for carcinoma. On the other hand, gastrectomy may be relied upon, almost without exception, to bring about complete relief and to prevent a subsequent recurrence. In our experience, patients have obtained a good functioning stomach, and within a few months after operation have been able to take an ample mixed diet without distress. We have not yet observed a recurrent ulcer at the stoma.

In view of the large number of failures of medical management and the possibility of malignant change, both medical and surgical opinion is definitely tending more and more toward resection as the treatment of choice for uncomplicated gastric ulcer. Conservative measures may be advisable for a short while if the ulcer is small and superficial and in a location less favorable for carcinoma, i.e., the lesser curvature or proximal half, or if the patient is under forty years of age. Yet, even in these cases, if the symptoms do not subside and the roentgenogram does not show evidence of healing after three or four weeks of medical treatment, surgery should no longer be postponed. Otherwise, the medical regimen may be continued under strict supervision and repeated check-up roentgenograms. If there should be symptomatic or roentgenographic evidence of a return of the lesion at any time, surgery is indicated.

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*Read before the annual session of the Mississippi State Medical Society, Jackson, Miss., May, 1944.

The mortality of resection for ulcer should be well within reasonable limits—five per cent or less. The location of the ulcer is seldom so high as to preclude resection or add to the risk. With only one exception, we have been able to perform a resection in all our surgical cases, and have had no deaths following operations for lesions in the proximal half of the stomach.

When one considers that medical measures are successful in less than half these cases, that the prospect of complete and permanent relief by resection is excellent, that a carcinoma is mistaken for ulcer in approximately one of every ten cases, and that the mortality rate of operation is small, the percentage being at most only one-half that of carcinomatous degeneration of the ulcer, one cannot but conclude that resection for gastric ulcer is, as a rule, the safest and most sensible course.

DUODENAL ULCER

Concerning the management of duodenal ulcer, even more than of gastric ulcer, one is impressed with the reversal of opinion within recent years. Duodenal ulcer is now recognized as being far from an essentially surgical disease, as was formerly thought and is true of similar lesions on the proximal side of the pylorus. The medical management of ulcer of the duodenum has been worked out so well that the large majority respond to this form of treatment. Despite this fact, the number of patients who require operation has not decreased. In reviewing our cases over the past ten years, we found that now, no less than ten years ago, approximately 30 per cent of our duodenal ulcer patients come to operation. Since our criteria for surgery has remained unchanged, this may be explained by the fact that we are seeing more patients with the type of ulcer which demands surgery.

Further, our interpretation of the choice of technic has gradually undergone a change. Aside from acute perforations, which constitute approximately eight per cent of the 30 per cent who come to operation, and in which a simple closure is usually done, palliative surgery has to a large extent been replaced by resection. We have not performed a pyloroplasty in our clinic since 1939, and in that year performed only one. In 1940, the number of our resections was twice that of our gastroenterostomies, whereas today, three-fourths of our operations for primary duodenal ulcers are resections. This increase in the more radical operation in our practice is paralleled elsewhere. Walters and his associates report that in 1940, gastroenterostomy constituted 55 per cent of operations for duodenal ulcer at the Mayo Clinic, and gastrectomy a little over 40 per cent. In 1942, this was reversed. Gastrectomy was carried out in over 57 per cent, while their gastroenterostomies fell to approximately 41 per cent. This means that we are not only seeing more surgical ulcers, but that time has convinced us of the superiority of resection over gastroenterostomy when such a course is feasible. Unquestionably, also, the procedure has been made feasible in a larger number of cases by more thorough preoperative treatment.

In determining the types of duodenal ulcer which should be treated by resection, we have been guided by four criteria, individually or collectively: (1) hemorrhage, (2) intractable pain, (3) obstruction, and (4) recurrent or reactivated ulcers.

Hemorrhage.—One-third of all our primary resections for duodenal ulcer have been performed for recurrent bleeding. We have limited operation to those cases in which the hemorrhage is repeated often and is associated with longstanding symptoms of ulcer, particularly pain. In such cases, the bleeding is found at operation to be coming from an ulcer on the posterior wall which has penetrated into the head of the pancreas and is produced by erosion of the blood vessels, usually one of the larger pyloric group. A more or less severe inflammatory reaction of the pancreas, with consequent edema and obstruction is usually present, and frequently an anterior ulcer is associated. We have, in fact, encountered both an anterior and posterior ulcer in 60 per cent of all our primary resections, and an associated gastric ulcer in ten per cent, making a total of 70 per cent of multiple ulcers.

Occasionally, one is confronted with a patient in whom the hemorrhage is of massive proportions. If the patient is young, it is our custom to operate only if transfusion and other supportive treatment fails to control the bleeding and raise the blood pressure to a satisfactory level withing 36 to 48 hours. With few exceptions, those under forty-five years of age will respond to conservative measures, as a clot usually forms and closes the opening in the bleeding vessel. In many cases, the hemorrhage is the first evidence of ulcer and the patient has had no opportunity to try medical treatment. If the ulcer is of long standing, however, and has been resistant to treatment, we believe resection is advisable as soon as the patient's condition will permit. In any event, after a second massive hemorrhage, operation is definitely indicated. In those beyond the age of forty-five and in whom the blood vessels have become somewhat sclerotic, a single massive hemorrhage is more serious. It is best to operate in this group within 12 to 24 hours unless continuous or repeated transfusions bring about a definite improvement, and even so, operation should be carried out following the patient's recovery from the hemorrhage. We have had only a few patients whose hemorrhage could be classified as massive, all of whom have recovered. Reports of large series, however, have shown that operation for massive hemorrhage in individuals over forty-five carries a high mortality, especially if the operation is delayed beyond the first 24 hours.

Intractable pain, which is practically always accompanied by high acid values and the digestive symptoms of ulcer, is our major reason for resection in a large proprotion of cases, Realizing the difficulty of relieving these patients by any type of treatment, we have attempted to select them with care. Operation has been advised only after prolonged medical treatment has proved ineffective, or if the patient has shown himself incapable of following a medical regimen for occupational or other reasons. On exploration, one usually finds both an anterior and posterior ulcer, the latter penetrating into the pancreas and being chiefly responsible for the persistent symptoms. After operation, it is often necessary to observe the patient frequently for an indefinite time. This is especially true of those of unstable temperament, since such individuals will often continue to complain, despite every physical and roentgenographic appearance of an excellent result.

Obstruction arising from inflammatory edema may generally be overcome by medical measures. Not infrequently, however, resection is necessary because of edema associated with a penetrating posterior lesion and superimposed upon a cicatrizing ulcer. Or, the obstruction may be of such long standing as to have produced an enormous dilatation of the stomach and to be entirely unresponsive to conservative measures. In these cases, we believe resection affords the best promise of relief.

A small number of ulcer patients, usually those past middle life with a history of constant or recurrent symptoms covering many years, require operation because of mechanical obstruction at the pylorus incident to the long standing inflammation and consequent cicatricial gastroenterostomy was considered ideal. Experience has shown that it is the one most amenable to cure by gastroenterostomy; the stomach acids are practically always low and the result is generally excellent. Nevertheless, within the past year we have been performing resection in this group of patients, also, as the procedure of choice. There are several reasons for this change of attitude. In the first place, the stomach is considerably enlarged, and the opening created by the small gastroenterostomy does not permit the contents to empty quickly enough. Second, the patient has a much quieter and more rapid convalescence. Third, the technical procedure is more easily executed, there being no firm adhesions between the duodenum and pancreas; and fourth, by removal of the ulcer-bearing portion of the stomach, we have every assurance that we have permanently rid the patient of his disease.

Gastrojejunal ulcers are observed most often in young or middle aged individuals with high acid values who have had a high gastroenterostomy. Many of them appear within a few days or few weeks after operation, and the majority manifest themselves within eighteen months. Although years may elapse before the patient comes to surgery, the history will usually reveal that the symptoms recurred within a short time. The symptoms, however, are a little atypical, the pain being slightly lower and to the left, more constant and severe, and rarely completely controlled by food or alkali. Bleeding often serious, has been associated in one-third of our cases.

It has been our observation that medical treatment for these ulcers gives only temporary relief. For this reason, we regard operation as imperative. Perforation into the peritoneal cavity, and especially into the transverse colon, is always a serious possibility. Frequently, also, the necessity for operation is increased by the presence of an active duodenal ulcer. We have operated upon seven patients with gastrojejunal ulcer, all of whom except one had an associated duodenal ulcer. In three of the seven cases, the ulcer had penetrated into the transverse colon, and in an additional two, or almost 30 per cent, a gastrojejunocolic fistula had developed.

Extent of operation—In our own experience, as well as in that of practically all other surgeons who have expressed themselves upon the matter, the ultimate success of resection depends chiefly upon its extent. The object of the operation is the control of hypermotility and hypersecretion and, by this means, relief of the patient's symptoms. It has been shown repeatedly that the major factor in recurrent ulcers following resection is failure to include the pylorus and antrum, this being the portion which is largely responsible for the activity of the acid-bearing cells. Thus, the operation should invariably be one which completely removes the antrum, the pylorus and the ulcer. If such a procedure is not technically feasible because of extensive ulceration or inflammatory reaction, it is better to be content with a gastroenterostomy. If necessary, an adequate resection may be readily accomplished after a period of physiologic rest.

Follow-up studies have shown that, with few exceptions, resection of 65 per cent of the distal portion of the stomach, together with the ulcer, is ample to fulfill all the requirements of the operation. Some surgeons consider it advisable to remove three-fourths or more, contending that absolute achlorhydria is essential. With this we cannot agree. The disturbance of gastric function and the total anacidity incident to such wide resection may bring about serious nutritional deficiencies. We have found that a relative achlorhydria gives excellent results, and see no point in depriving the patient of any more of his stomach than is necessary. In fact, it is our conviction that removal of 50 per cent is frequently just as effective as the more massive resection, and that excision of more than two-thirds is unwarranted unless the acids are excessive or an extensive gastritis is present.

The Polya anastomosis has been employed routinely in all our gastrectomies, with an occasional Balfour modification when the operation was exceptionally high. We believe that, with these technics, the acid factor is better controlled by reason of the rapid emptying, which limits the admixture of acid with the stomach contents, and by reason of the fact that the maximum amount of bile is admitted into the stomach through the larger opening. During the early postoperative period, too rapid emptying is prevented by spastic contracture of the jejunum, and after healing is complete, the jejunum acquires a certain immunity to the stomach acids and itself assumes some degree of digestive function. In addition to these features, obstruction incident to adhesions or to contracture of the stoma from scar tissue is less likely following the Polya or Balfour technic.

We prefer the posterior anastomosis when feasible, in that the jejunal loop is shorter and emptying into the upper jejunum is more direct. In the anterior anastomosis the loop is longer, and since the contents of the stomach are thus emptied into the jejunum quite a distance down from its origin, more time is required for the jejunum to become accustomed to its new function than when the higher anastomosis is used. In many cases, also, one must remove the greater omentum in order to facilitate the performance of the anterior procedure. Moreover, in the latter, the anastomosis is exposed to the abdominal wall and is less protected than if placed posterior to the colon, as in the Polya operation. Practically, however, the anterior or Balfour method has proved satisfactory in the few cases wherein we have found it necessary.

We have never performed an additional enteroenterostomy, even in our highest resections for ulcer. This procedure is not only unnecessary, but tends to prevent a material reduction in gastric acidity and thus increase the danger of recurrence.

Results—We are reporting a series of 91 resections for gastric ulcer alone, six for gastric and duodenal ulcer combined, 56 for primary ulcer, seven for gastrojejunal ulcer, and 16 for recurrent or reactivated duodenal ulcer.

Considering as one group those with gastric ulcer alone and associated with duodenal ulcer, 11, or 91 per cent of our gastric ulcer patients, have obtained an excellent functional result from resection and are free of their former symptoms. The twelfth patient died from a pulmonary embolism following operation, constituting a mortality of nine per cent. The earliest operation in these 12 cases was performed nine years ago, the latest eight months ago.

Of the 56 patients with primary duodenal ulcer, one succumbed to pneumonia postoperatively—a mortality of a little less than two per cent. Of the remaining 55, 42 were operated upon more than a year ago. Of these 42, 30, or 70 per cent, have a good or excellent result, being able to take a full diet, and in many cases only three meals a day, without pain or distress. Eight, or 20 per cent, are regarded as having a fair result, in that they complain of some nausea and vomiting, or weakness or lack of appetite, or an occasional vague discomfort, but aside from this, get along very well. By adding the 70 per cent with complete relief to the 20 per cent with partial relief, we may consider that 90 per cent of the resections were followed by satisfactory results.

Two of the 42 operations, or 5 per cent, may be regarded as failures insofar as the patients' comfort is concerned. One other operation, or an additional 2.5 per cent, was a failure in that the patient has all the clinical and roentgenographic signs of a recurrent ulcer at the stoma. At operation, both an anterior and posterior ulcer were found.

TABLE I

Results of Gastric Resection in 42 Cases of Primary Duodenal Ulcer

	Complete Relief	*Partial Relief*	*No Relief*	*Died*	*Total*
Bleeding Ulcer	10	4	0	0	14
(7 multiple)					(33.3%)
Intractable Ulcer	14	4	3	1	22
(14 multiple)					(52.4%)
Obstructive Ulcer	6	0	0	0	6
(2 multiple)					(14.3%)
TOTAL	30	8	3	1	42
	71.5%	19%	7.1%	2.4%	100%

It is of interest to study these results of resection for primary duodenal ulcer from the standpoint of the pathologic condition found at operation, as shown in Table I. It will be seen that 14 of the 42 patients who were operated upon more than a year ago had a bleeding posterior ulcer, seven of them with an associated anterior ulcer. Ten of the 14 were completely relieved and four partially relieved. Thus, the entire 14, or 100 per cent, were benefited by the operation. There were no deaths in this group.

Of the 22 for whom resection was performed for intractable pain, 14 were completely relieved, four partially relieved, two continued to have severe symptoms, an additional one developed a gastrojejunal ulcer, and one died. The 18 who were benefited by the operation constitute 80 per cent of the 22. Fourteen of the group had an anterior as well as a posterior ulcer.

All of the six patients with obstruction have remained entirely free of trouble since the operation. Two of the six had both an anterior and posterior lesion.

Although this series is small, it provides further evidence that obstructive ulcers of the duodenum are most amenable to cure, that resection for bleeding ulcer may be expected to give the next best results, and that for intractable ulcers the prospect for relief is somewhat less certain (100, 93 and 80 per cent, respectively, in our experience).

Of the total of seven patients for whom a resection was performed for gastrojejunal ulcer secondary to gastroenterostomy, five, or 71.4 per cent, have been completely relieved and one, or 14.3 per cent partially relieved. As mentioned previously, one patient, with a colon fistula, died (14.3%). A period of eight months to eight years has elapsed since the operations in these cases.

Of the remaining 16 who had resection following a previous pyloroplasty or closure of a perforation, three have some slight distress after meals and one occasionally has some pain, with nausea and vomiting. With these three exceptions, the results have been excellent, although a few still find it necessary to follow a diet. The operations in this group were performed from seven months to nine years ago.

TABLE II

Mortality of 91 Resections of the Stomach for Benign Ulcer

	Number Cases	*Number Deaths*
Primary duodenal ulcer	56 (61.5%)	1 (2%)
Gastric ulcer,	12 (13.1%)	1 (9%)
(Six with duodenal ulcer)		
Gastrojejunal ulcer	7 (7.7%)	1(14%)
Reactivated duodenal ulcer	16 (17.6%)	0
TOTAL	91 (100%)	3 (3.3%)

Table II presents a composite picture of our mortality of resection for all types of benign peptic ulcer. As will be seen, in a total of 91 resections, we have had three deaths, or a mortality rate of 3.3%. Considering the magnitude of the operation and the fact that a large proportion of the fatalities may be attributed, in part at least, to some unusual complication or associated disease, we feel that the mortality can by no means be regarded as a deterrent to its use. We have had no deaths from resection for benign lesions of the stomach and duodenum for the past eight years.

The Progress of Medical Education

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ALTHOUGH the science of medicine is one of the oldest, dating back to the remotest period of which we have any historical record, it was not until the present century that much progress was made in this greatest of all sciences.

At no distant time surgery was entrusted to the barbers. Even during this century before the discovery of anaesthesia (ether), the most skilful surgeon was the one who, with the patient tied hard and fast to the table, could take a long knife and most quickly, with the fewest strokes, amputate a mangled leg.

During the early years of the habitation of America by the white man, witchcraft was practiced and believed in by many of the early settlers. It has been during the lives of most of us that the laws governing the practice of medicine have been passed.

Ever since the Civil War, most of the Southern states passed laws permitting the Confederate veterans to practice medicine without examination. Fifty years ago the few medical colleges in the United States gave courses of lectures extending over two sessions of four months each. These colleges had no entrance requirements save the payment of tuition. The State Board of Examiners had practically no requirements except to pass examinations given by incompetent examiners. It was a notorious fact that many young applicants were furnished the questions days before the examinations were held. As a result, there were many incompetent so-called doctors.

Now, to secure a license to practice medicine in Mississippi, the young doctor must be a graduate of a recognized medical college. To enter most of our medical colleges he must be a graduate from a standard literary college. Before he can enter a standard literary college he must be a graduate of an affiliated high school.

The standard is constantly being raised and the next generation of doctors of necessity will be the best educated class of scientists the world has ever produced.

The acquisition of new knowledge is slowly but persistently pushing back the horizon of the unknown so that the present generation has witnessed a transformation of empirical medicine into something which more nearly approaches the dignity of an exact science. This progress has been largely due to improvements in methods of investigation and diagnosis, resulting from increase of knowledge in chemistry and physics; to better microscopes and new instruments of precision; to experimental work in laboratories and to the application of scientific method and system in the observation and recording of cases of disease and of the results of different modes of treatment. The introduction of statistical methods in the study of cases of disease and of causes of death; the discovery of general anaesthetics;

the adoption of antiseptic methods in surgery; and the development of modern bacteriology—each marks a point in the history of medicine in the twentieth century.

The medical profession has done more for the race than has ever before been accomplished by any other body of men. These gifts to the people have come in the form of vaccination, sanitation, anaesthesia, antiseptic surgery, the science of bacteriology, and the art of therapeutics. Now chemotherapy (with discovery of sulfa drugs and penicillin) bids fair to revolutionize the treatment of most diseases. We wait with baited breath to learn what new methods will result from the present war.

With the accumulation of medical knowledge, the medical schools have been forced to raise their standards.. In the period between 1880 to 1900, the number of medical schools in the United States increased from ninety to one hundred fifty-four. But many of them failed to maintain high standards; in fact, there was no particular standard at all.

There was an air of confusion in the whole set-up. Proprietory medical schools canvassed the country for students. There was no uniformity as to curriculum and the requirements for entrance were extremely low to say the least.

In 1902, a movement was started for a higher educational requirement for admission to the medical schools. In some instances a college degree was urged. In 1904, the Association of American Medical Colleges provided in its by-laws that after July 1, 1905, the sixty colleges in its membership must either withdraw or demand as a minimum for matriculation either diplomas showing completion of a four-year high school course, a normal school course, a bachelor's degree from an approved college, or an examination in specified branches.

In 1908, one hundred nineteen medical schools required a high school education for admittance. Twenty-six schools required one year of college and eleven schools required two years of college. In 1940, eleven schools required two years of college, but sixty-one required a bachelor's degree or its equivalent before entrance into a medical curriculum. So the trend has plainly been toward men of greater preparedness.

Medical school income was obtained, forty years ago, largely from students' fees. Many schools were proprietory and planned to yield a profit to the faculties. In some instances the faculties were owners of the schools. Now the better schools are endowed.

There has been, likewise, an extensive change as to faculties. A third of a century ago, the faculties of most medical schools consisted almost wholly of practicing doctors who had not been specially trained in the teaching of anatomy, physiology, pathology, or bacteriology. Now, in practically all the medical schools the faculty in the fundamental branches is composed of trained men who devote themselves entirely to teaching and research. This is a most important change and it has worked out to the great benefit of students in medical schools.

In the earlier days lectures prevailed in teaching medicine in the medical schools. Now, nearly every medical school has laboratories fully equipped for teaching and research.

There were few medical schools directly associated with hospitals before 1910 for teaching purposes. Many larger schools today have teaching hospitals.

Naturally as a result of better equipped schools, better paid, trained teachers, longer courses of study, the cost has gone so high it has become almost prohibitive for a poor boy. Twelve years spent in high school, four years in a literary college doing pre-med study, four years in medical college, and two years internship has cost twenty-two years of a boy's life and twelve or fifteen thousand dollars. If to this there is added income that might have been earned in these years, if spent in remunerative employment, the grand total for cost of medical education to the average student would be about twenty thousand dollars.

All of which to my mind adds up to this—twenty-two years of time, twenty thousand dollars in cash, educated to work in a hospital—farewell to the old country doctor. The modern young doctor will not be willing to locate where he does not have hospital facilities. The solution of the doctor shortage will require a hospital accessible to every part of the state. A law obligating the state to assist in the building of local county or community hospitals was passed by the recent legislature.

Mississippi, at the University, offers the first two years of medicine. Her students have established an enviable record wherever they have gone, for the last two years. A few years ago, Dr. Bass, dean of Tulane, told me that the boys from Mississippi University were among their best students. The first two years of instruction being largely didactic can be taught without hospital facilities. The last two years being largely clinical, if properly taught, should have instruction in clinics or at the bedside. The establishment of a four-year medical school in Mississippi would require a large hospital and medical school buildings and equipment, costing anywhere from $5,000,000 to $10,000,000. Is Mississippi ready for such a school? Mississippi has always excelled in her undertakings. If we have a medical school, we should have nothing less than the best.

The success of any undertaking depends largely on the man at its head. Most of our successful institutions were built around an outstanding leader. The University of Mississippi Medical School was established and the foundation of Mississippi's health program was laid by a great leader, Dr. W. S. Leathers. Undoubtedly, history will record his name, in Mississippi's Hall of Fame, as one of her most illustrious sons. Were it possible to secure his services, he is the one person who possesses the qualifications necessary to plan and conduct a successful medical school.

Bilateral Abductor Laryngeal Paralysis*

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THERE IS hardly a more important organ of the body than the larynx. Of the several laryngeal functions three are of paramount importance in the following order: in respiration, protection against substances other than gases entering the tracheo-bronchial tree, and phonation. Variation from the normal in any of these should be thoroughly investigated.

The intrinsic muscles of the larynx either adduct, abduct or vary the tension of the cords. Abduction is performed by the posterior cricoarytenoids alone; adduction by the lateral cricoartenoids, interarytenoideus and the thyroarytenoids. The latter also relax the tension of the cords on phonation. The cricothyroids increase the tension on phonation. An important group of muscle fibers located in the arytenoepiglottic folds aids in closing the larynx from above.

In spite of some disagreement it is generally conceded that with the exception of the cricothyroids all of the intrinsic muscles are innervated by the recurrent laryngeal nerves, branches of the vagus. The interarytenoideus, being in the midline, is supplied by both nerves. The cricothyroids are innervated by the external or motor component of the superior laryngeal. Although attempts at diagnosis and localization of lesions responsible for motor paralyses are interesting, the results are often disappointing. Emphasis in this discussion is being placed upon the bilateral occurrence of abductor paralysis and the surgical correction thereof. Lesions producing paralysis are found intracranially, cervically, in the thorax, or in the larynx itself. Since by far most bilateral abductor paralyses follow thyroid surgery it is for the relief of these that the various types of operations have been devised. "Sectioning of one recurrent laryngeal nerve is an unfortunate accident; to injure both is a tragedy" wrote Fred W. Rankin in 1929 when reviewing the results in 4200 thyroidectomies performed at the Mayo Clinic. Nothing truer was ever spoken.

The immediate effects of injuring both nerves are severe. Voice is lost and respiration may be interfered with to the extent that a tracheotomy may have to be performed immediately. Equally important is the loss of the protective function which allows food to be aspirated, often resulting in aspiration pneumonia. If the patient survives the first week or two, his appearance offers hope to the anxious surgeon, for the respiration improves along with reëducation of the patient to take small amounts of food at a time, thus avoiding spilling over into the larynx.

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The usual tragic sequence of events then consists in, first, an improvement in the breathing and voice, only to be followed in two to six months by inspiratory obstruction of varying degree due to the gradual approximation of the cords. It is during this the second stage that an attack of acute laryngitis may call for a tracheotomy if the first stage was successfully passed without one, by further diminishing an already insufficient airway. If the stormy second stage is weathered a patient will become a third stage victim, reduced to a "ground floor" level of existence like that of the decompensated cardiac, with cords in the cadaveric position and a constant fear that any respiratory infection may precipitate more severe obstruction.

The real cause of the gradual adduction has been explained in several ways. Since even in bilateral sectioning the cricothyroids are spared, their unopposed tonus gradually lengthens the anterior posterior diameter of the larynx stretching and approximating the cords. Dr. Brien T. King bases his concept on this point on the behavior of skeletal muscles elsewhere in the body whenever the nerve supply is interfered with, contending that there is first flaccid paralysis followed by atrophy and later fibrosis and contracture. According to him contracture of the interarytenoideus approximates the arytenoids and consequently the cords. In Turner's *Textbook* importance is attached to the small difference in the elevation of the central and lateral portions of the cords, presumably on inspiration they are depressed and approximated by a valve-like action. This has some basis for support because expiration is not affected, but it is probably a late effect since some other mechanism must be at work to have brought the cords close enough to act as a valve in this manner. One or all may play a part. At any rate relief from this near intolerable situation has been the aim of many operators and operations.

Until recently the operations could be classed into four groups:

1. Nerve suture or transplant.
2. Cordectomies and cordotomies.
3. Anterior commissure separating operations.
4. Tracheotomy with or without a valved cannula.

All were attended by some degree of success but each had its undesirable result.

In the case of nerve suture or graft the skill required and the existence of two groups of nerve fibers which one had no way of identifying made the successful tasks few. Also, it was aften impossible to locate the peripheral end of the recurrent because it was cut too close to the larynx or was incorporated in a bed of scar tissue, the result of the thyroid operation.

The cord operations have the serious fault of sacrificing voice for an improved airway, and this is not an easy function to give up. For this same reason separation of the cords at the anterior commissure is undesirable.

This leaves only the operation of tracheotomy which Sir St. Clair Thomson favored. The nuisance of a tube soon makes a patient forget his original need for one.

Such was the situation when Dr. Brien T. King, taking his cue from orthopedic surgeons whom he saw transplanting tendons, began to investigate the possibilities of muscle transplanting as applied to the field of laryngology. Since the operation is one which fortunately few of us wish to perform I shall not discuss the technique. Essentially it consists in transplanting the anterior belly of the shortened omohyoid to the arytenoid cartilage of the same side. Since the muscle is both voluntary and involuntary, it contracts on inspiration abducting the cord on that side. Phonation is not interfered with, which is the great advantage over the other types previously used. Dr. King's latest report is of twenty-eight cases, most of which have been completely successful, and every journal attests to the fact that others are performing his operation or modifying it with good results. He emphasizes the need for early operation so as to prevent fixation of the cricoarytenoid joint. If this has already occurred it is necessary to free the joint by splitting the capsule and placing a tension suture on the arytenoid cartilage so as to keep it abducted while the transplant is becoming attached.

The following case is an example of what may befall the thyroid surgeon.

A forty-two-year-old white female was referred to us by her family physician for diagnosis. History revealed that three months previously she had undergone a thyroidectomy in a nearby city. The relatives reported that they noted and commented upon the fact that she was breathing noisily when brought from the operating room but upon being assured the condition would clear up were not alarmed. She also had much difficulty at first, but this and her breathing improved for a time. For several weeks the patient's voice had grown much better, but her breathing had again become affected so that especially while asleep she made a terrible noise. The previous week she had had a cold and her physician found it necessary to sit her up in bed and administer a sedative.

Physical examination revealed a woman who could hardly walk and was forced to pause between words of her story. A recent thyroidectomy scar was in evidence. Her voice was of good tone but lacked volume. Indirect laryngoscopy showed the glottic chink to be about the width of the edge of a nickel on deep inspiration and the cords in approximation on pronation. The condition was recognized and she was referred to Dr. Francis LeJeune who performed a Kelly modification of a King operation on the left side, on December 29. By February 24 Dr. LeJeune made the notation that the airway was ample and voice good.

This case emphasizes the need for pre- and postoperative examination on thyroid surgery cases. The preoperative recognition of unilateral cases of abductor paralysis will in all probability prevent such a tragedy from happening to our friend, be he surgeon or patient. It is our responsibility, therefore, not only to make the examination available but to point out at every opportunity the importance.

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DISCUSSION

DR. GEO. E. ADKINS (Jackson)—Bilateral abductor paralysis is one of the few diseases that we seldom see, because both recurrent nerves must lose their function, and although thyroidectomies are given as the most frequent producer, it would not seem reasonable that a large percentage of bilateral injuries should occur, but those along with the few that come from central origin and malignancies about the larynx just about cover the field.

When bilateral abductor paralysis does occur, especially when it follows a thyroidectomy, it claims the attention of the surgeon, the laryngologist, a good general physician and a lot of tolerance on the part of the patient and the family.

We find a distressing inspiratory dyspnea, emaciation, anemia and likely a myxedema resulting from the loss of thyroid gland, as well as a tetany from loss of parathyroids. The voice probably would show some changes immediately following the injury, but soon recovers to the extent of not being a diagnostic symptom. The history and the general condition of the patient, plus a laryngoscopic examination (which is not at all easy) make up the diagnostic data.

The relief from this distressing condition would be time, to some extent, but this is probably due to the patient being able to adjust himself to the condition, and not from actual relief, but just as frequently the patient becomes increasingly disturbed. The establishing of an airway is of first importance and has been very satisfactorily taken care of by a low tracheotomy. A one-way tube should be used because it admits a plentiful supply of air and also preserves the voice. The removal of one cord by the submucus method has brought very good results. Anastomosing the hypoglossal nerve has not been as satisfactory as we had hoped. Just here I might suggest to those of you who attempt thyroid surgery that the artery be ligated as far from the gland as possible. It forms a distinct U and then turns toward the gland and enters at a right angle. If the vessel is ligated well laterally, there is not much danger in injuring the nerve.

I have no experience with the planting of the omohyoid to the arytenoid cartilage, but, from the pen of good men, I find that it is meeting with more favor than any former method of relief. I should predict that it will become the remedy of choice and certainly the technique, and judging from the anatomical relations, should be simple.

DR. C. A. MCWILLIAMS (Gulfport)—Dr. Abernethy has given us an excellent paper on this rather uncommon condition. I say uncommon since we have seen only two cases in the past thirty years on the Coast. Since the majority of the cases are the result of some surgical procedure in the thyroid area, usually a second or third thyroidectomy, we naturally see few cases compared with localities where enlarged and diseased thyroids are prevalent. One case was a college girl eighteen years of age who suddenly without any apparent cause had great difficulty in breathing. She had a bilateral paralysis of the cords with no laryngitis. Fortunately she cleared up within twenty-four hours without a tracheotomy.

Public Health and Plans for Peace*

FELIX J. UNDERWOOD, M.D.
Executive Officer
Mississippi State Board of Health

PEACE IS a golden word. Within it lies the hopes, the yearnings, and the ultimate consummation of what millions have lived and died for. The war-weary of the world are made wistful by the very sound of it. Many there are who have never known what peace is like, but to others its memory is still fresh and stimulating, inspiring continuous effort to bring about its reality at the earliest possible moment. How wonderfully welcomed that day will be that ushers in a cessation of hostilities on all fronts!

Let us not be deluded into thinking that peace will follow immediately the surrendering of arms by the aggressor nations. That is only the first step. With it will come the most gigantic task we have ever faced. The need for relief and rehabilitation will be tremendous; public health hazards and disease will increase unless the greatest of precautionary measures are taken on an international scale. Our responsibilities as public health workers will be multiplied. We must not fail to recognize that to achieve an enduring peace the contributions to public health loom as an important factor; in fact, the most essential factor of all when viewed in the light of the most destitute needs of the world's peoples.

There is no doubt but that we are on the threshold of a new era in public health. Just how substantial our gains will be will depend in great measure upon the degree of preparation we make for the handling of the multitude of problems now confronting us. Unquestionably, there must be some well formulated plan on a broad scale to which we can give our fullest support and efforts. I do not believe there can possibly exist among the public health profession many isolationists. The feeling is almost unanimous that international coöperation is a prime necessity in coping adequately with health and disease problems resulting from this war. The lessons of twenty-five years ago taught us how tremendous in scope these problems can be. This time they will probably be even greater but we have some advantages in that there is now better health organization and many more effective procedures plus a much larger corps of trained and experienced public health workers to do the job.

It is good to see the advance planning of such an organization as the United Nations Relief and Rehabilitation Administration. Anticipating the immediate needs of relief in liberated countries and the vast machinery needed for such a program, systematic planning was begun in 1943 which led to the creation of U. N. R. R. A., composed of 44 member nations. Its function is to provide food, clothing, shelter and other necessities of life, to aid in the prevention of epidemics and in the recovery of the health of the people. It is intended to assist them only for a limited period, until such time as they are able to stand on their own feet, producing by their own efforts such resources as are needed to sustain them.

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*Presented before the Second Wartime Public Health Conference, American Public Health Association, New York, N. Y., Oct. 3-5, 1944.

The far-reaching significance of this undertaking should be apparent to the public health profession. We are vitally concerned in the restoration of health services in the countries affected. Too, we are interested in the long-range perspective of the Health Organization of U. N. R. R. A., as it undoubtedly will form the framework for a more permanent international health organization. The interdependence of nations in matters of health security is one of the most important revelations of this century. The shortening of distances through the great speed of modern-day transportation has brought all countries closer together. With it has come the realization that the inadequacies of a few nations, from the standpoint of health, economics and education, can affect the progress of all. There is no longer any excuse for these inadequacies. There is more than enough of the necessities of life for everyone. Their production, distribution, and consumption must be worked out scientifically. The elimination of the chief cause of disease—poverty—and the raising of standards of living among the hard-pressed peoples of the world will do more to advance social progress and preserve peace than anything else. Failing to recognize the humanitarian aspects of this ideal of providing opportunity for a more satisfying existence for the less fortunate among us, self-interest alone would dictate that we do our share in making them self-supporting and able to contribute their share to social and economic progress in the world community.

Our distinguished colleague, Dr. C. E. A. Winslow as a member of the Commission to Study the Organization of Peace, recently contributed a sound and informative article[1] on international organization for health. Drawing upon his intimate experience with the League of Nations Health Organization, he has outlined a commendable plan for the future, which I heartily recommend for your perusal and study. "There are at least three major types of activity which are essential to an adequate program of world health," he states, "which are within the practical scope of an international health organization and which can be performed only by such organization.

"The first of these functions is the coördination and standardization of the results of research and of administrative practice in the field of public health . . . The collection and analysis of vital statistics from all nations and the continuing dissemination of information with regard to the local prevalence of epidemic disease would be a vital aspect of this function.

"A second primary function of the world health organization should be the training and distribution of public health personnel through study tours and postgraduate training . . . It should be in a position to loan key personnel for leadership in the education of new national recruits and in the setting up of new local administrative health procedures. Assistance of this type would often involve the organization of commissions of international experts to study special local situations and to prepare practical programs for their improvement.

"Finally, in the intermediate stages between direct relief and rehabilitation and the attainment of a world order in which all peoples will enjoy, as a birthright, the benefits of public health science, our world organization should be in position to stimulate the development of national health work in the less fortunate countries possibly through a system of grants-in-aid . . . The experience of the Rockefeller Foundation shows how valuable such a policy may be . . . Our ideal must be ultimate economic as well as political independence. Where a given nation is now on an economic level too low for the provision of the basic decencies of life, the most important service we can render to that nation is to make an intensive study of its resources in manpower and materials and try to devise a program of national self-support on a level consonant with democratic opportunity . . ."

Thus speaks one of our best known and most competent authorities in public health, one who some fourteen or fifteen years ago gave us the best over-all definition of public health we have ever had. There is doubtless not a person here who is not familiar with this definition, but because it seems to glow with new significance as we prepare ourselves for the tasks ahead, I think it is good for us to repeat it now and then.

"Public health," Dr. Winslow[2] states, "is the science and the art of preventing disease, prolonging life and promoting physical efficiency through organized community efforts for the sanitation of the environment, the control of community infections, the education of the individual in principles of personal hygiene, the organization of medical and nursing service for the early diagnosis and preventive treatment of disease, and the development of the social machinery which will insure to every individual a standard of living adequate for the maintenance of health; organizing these benefits in such fashion as to enable every citizen to realize his birthright of health and longevity."

Reflect upon this, if you will, and think of "community" in terms of world community, not just your town or county back home. There must be provision for adequate health services for the peoples of the world in whatever program might be undertaken for an enduring peace. This, I believe, we all recognize.

There has already been some valuable experience in international health organization from which we can expect to profit. First was the Office Internationale D'Hygiene Publique, which was the culmination of a series of conventions dealing with measures to protect against the spread of cholera, yellow fever, plague, typhus, and other epidemic diseases. Established in Paris in 1909 as a result of international agreement, there were 55 countries participating before the war and much creditable work was accomplished. Staffed by a full-time medical director, a general secretary, a small permanent clerical staff and a few part-time men of medical experience, the Office Internationale D'Hygiene Publique was under the authority and control of a permanent committee made up of delegates of the contracting governments. As such an organization, it was said[3] to have been able to carry out its recommendations with much greater certainty of effective action than was ever possible for the Health Organization of the League of Nations, "where the members of the Health Committee did not sit as representatives of their governments, but as experts only." Although, by its constitution, it was limited to accomplishments in the field of work for which it was created, it did do an exceedingly effective job in this one phase of international health work and opened new vistas for future accomplishment. Regional bureaus which coöperated in its work included our own Pan-American Sanitary Bureau, as well as the Eastern Bureau of the Health Organization of the League of Nations at Singapore, and the Sanitary Maritime and Quarantine Board at Alexandria.

The Pan-American Sanitary Bureau came into existence in 1902 following several conferences dealing with yellow fever and measures for its control. It is concerned today in the prevention of the international spread of all communicable diseases and in the maintenance and improvement of the health of the 21 American republics. Its constant dealings with other governments have given it something of international rather than mere regional status. By and large, its objectives adopted in 1924 and incorporated in the Pan-American Sanitary Code might well be studied and utilized in formulating an organization of world-wide scope. These objectives are:

1. The prevention of the international spread of communicable diseases.

2. The promotion of coöperative measures for the prevention of the introduction and spread of disease into and from the territories of the signatory governments.

3. The standardization of the collection of morbidity and mortality statistics.

4. The stimulation of the mutual interchange of information which may be of value in improving public health and combating disease.

5. The standardization of the measures employed at places of entry for the prevention of the introduction and spread of communicable diseases so that greater protection against them shall be achieved and unnecessary hindrance to international commerce and communications eliminated.

The Pan-American Sanitary Bureau also maintains a system of epidemiological intelligence which covers a much broader field than that of the International Public Health Office, conducts scientific studies and publishes a monthly periodical. I think we can be justly proud of the Pan-American Sanitary Bureau and its record of work. No matter what final form of international organization might be adopted, it will be in position to contribute valuable assistance and experience.

The most outstanding example we have had to date of international coöperation in public health and medicine has been, of course, the Health Organization of the League of Nations. Its achievements are well known to the public health worker and helps him to appreciate more fully the vast potentialities of international collaboration in health work. A thoughtful study of the Health Organization's internal structure, its wide range of activities, and any deficiencies or handicaps, is in order at this time when we can readily foresee that some type of international health organization will continue to exist. It is of the greatest urgency, in fact, that we have a comprehensive understanding of the exact needs in this field in order that we may be able to contribute leadership, and also be able to participate fully and well in achieving the desired goals of an international health organization.

The Health Organization consisted of a Health Committee, made up of members of the principal health administrations; an Advisory Council, being the Permanent Committee of the International Public Health Office; and a Health Section which formed part of the Secretariat of the League and consisted of a director and a small staff of specialists to carry out any program which might be initiated by the Health Committee. Some of its most outstanding work was accomplished by its technical subcommittees, which engaged in such activities as biological standardization, malaria control, typhus, leprosy, cancer, nutrition, housing, rural hygiene, and medical and public health training. Foremost among the Health Organization's achievements was its extensive service of epidemiological intelligence. It collected and published statistics reviewing all infectious diseases throughout the world and every country was able to benefit by this information. Individual countries could also request the services of the experts of the technical committees to assist them in working out a given health problem. Specific examples of such assistance were the help given Greece and other governments in the reorganization of local public health services; expert opinion and advice to Albania regarding the best measures for coping with malaria; and similar service regarding the control of epidemic diseases for numerous other countries.

The Health Organization of the League of Nations undoubtedly accomplished much work of a high character and paved the way for a permanent type of international health organization which we hope will have fewer obstacles and handicaps to overcome in attaining the vast potentialities which international collaboration in public health can make possible.

It is an inspiring and breath-taking picture, but in spite of such tremendous proportions cannot be realized except through an evolutionary process of painstaking and methodical procedure, weighing carefully all considerations. That there will be an international health body, there can be no question, but progress usually comes slowly if it is to be enduring. American public health workers undoubtedly will be looked to for no small measure of coöperation and leadership because of our record for speedy and sound accomplishments in recent years. I therefore commend to each of you a thoughtful and serious study of the efforts made in the field of international health organization in the past, especially the Health Organization of the League of Nations, and regional agencies of a similar character though limited in area, in order for you to determine more readily weak points and strong points in drawing up a blueprint for the future.

While acknowledging our obligations in support of a strong international health organization to do its part to perpetuate the peace and welfare of peoples throughout the world, we look about us with a realization that we are far from adequate in the provision of public health facilities right here at home. True, we were making substantial headway in meeting certain needs until the war came. Since then, almost everyone has experienced shortages of personnel, equipment, and other resources, until it is rare indeed to find a public health department which has not felt the impact of new demands and changes in the emphasis of its program. Everyone is looking forward to the day when we shall have enough real, honest to goodness, trained personnel to do the enormous volume of work which no international expert would fail to recognize as essential to the best health interests of our own people — your neighbor and mine. This is our first concern, it seems to me, before we can participate effectively on broader scales.

To achieve this first and foremost aim, as well as all others, it becomes increasingly apparent that trained personnel in adequate numbers is what we must now begin to think about. No considerable effort has been made in the past to attract young promising students to the field of public health. When they did take it up, it was often by chance, or as a result of a chain of circumstances which impressed them with the worth-while opportunities for service it afforded. Today, the public health picture is bright, and leading universities have shown the foresight of providing excellent courses leading to a career in this field. Grants-in-aid and special scholarships have enabled many competent individuals to prepare themselves more adequately for a public health career. This type of assistance has been most helpful and needs to be continued at this time as never before. To the agencies which have made it possible, we owe an everlasting debt of gratitude.

Having made full and adequate preparation for a public health career, it is but fair that one be allowed to pursue it with a minimum of encumbrances and artificial barriers, especially those of a political or partisian nature. All the joy and satisfaction ordinarily derived from public health service can be dulled or even made to look unattractive if the office is untenable, or if rightful prerogatives have to be sacrificed for political expediency. I would urge therefore that steps be taken throughout the length and bounds of this country and its territories to strengthen public health organization, and where it has not already been done so to free individual state and local health departments of any political control or interference. That it can be done is attested by the large number of health departments which have operated efficiently for years with little or no interference from any political administration. All governments recognize the importance of the public health program, and good governments are eager and willing to support sound legislation leading to a higher degree of efficiency of public health performance.

We need no prophet to tell us that we are approaching a period in which revolutionary developments will take place. Public health is bound to expand in response to both need and public demand. Let us try to be ready in every way to meet these needs and demands in a thorough and efficient manner, and thus insure that the way shall at least be smoothed to achieve an enduring peace.

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THE COVER

Christmas Seal time is here again. This heartwarming practice of buying cheery little seals to help combat tuberculosis, began just forty years ago and has since become a worldwide tradition. The Christmas Seals are sold in 46 countries. This year, as usual, they make their appearance. In a war-torn world they are reassuring reminders that we live in a civilized world and humanity has goodness in it after all.

This year, as never before, the Christmas Seals are needed. Tuberculosis is on the increase. The steady progress of medical science in the treatment of the disease has not been sufficient to stem the debilitating inroads of war. Our crowded war production centers, overwork and nervous exhaustion have been an open invitation to tuberculosis. The great tragedy is that too many persons don't realize it when the unwelcome guest has found its way into their homes.

The Christmas Seal has a new significance this year. It is one means by which all of us can take part in the fight against the renewed threat of man's ancient enemy — the white plague.

The Mississippi Doctor

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The journal with a vision which encourages a plan of delivering modern medicine to the masses at less cost to the individual and more profit to the practitioner. It champions the community hospital, the hub around which this service must be built.

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After the war we will have need for some changes and streamlining in medical education. America will be the medical center of the world. The war shocked and crippled soldier will be looking for end results at our hands. It is going to be up to the profession to utilize all the aids possible to a successful end. The social worker, the church, the service clubs, all will be needed, but the practitioner, the general man, must be the leader, the director of all the medical, the psychological, and the social aids to help the soldier back to a normal, useful and happy life. Also, thousands of people in civil life require this same type of treatment in a large measure. Medicine in its entirety must work as a unit. It must be hooked up to function in the entire life of the individual. It would be very appropriate for Mississippi to come to the front with a four-year medical school that has the vision and the practical application to take the lead for a new order in medicine, an order that would see and feel the responsibility of giving the best in medicine to all the people. Its purpose would conspire to make the very best type of citizen for war and for peace, for living the successful life in human society.

§

In the armed forces we have one doctor to about two hundred people, in the United States at large, one to 1300, in Mississippi one to 2500. Mississippi has 63 doctors under thirty-five years of age left in practice. In the United States about ten per cent of the population is above sixty years of age, but in Mississippi 54 per cent of the doctors are past sixty years of age. The doctors past seventy years of age in our state have and are displaying the finest type of medical patriotism ever known in this country.

It is time for every doctor, not excepting one, to do his full duty as a doctor either in civil practice or in the armed forces.

§

The meeting of the Southern Medical in St. Louis, November 13-16, was very good. The attendance was off a little perhaps, but the interest was fine. It brought to the doctors in civil practice some valuable information gained in the armed forces and we are sure the army doctors were benefited also. The public night session was a marked success in our opinion. We think that a public night is very fine for all annual sessions—state, district and national. We need united effort on the part of both doctor and laity for the accomplishments of the urgent needs in medicine. Dr. James A. Ryan, of Covington, Ky., served well as president. Dr. E. G. Ballenger of Atlanta is the incoming president, and Dr. M. Y. Dabney was the unanimous choice of the Association for president-elect. It has been 22 years since Alabama had a president. Dr. Dabney is able, worthy, and well-qualified in every respect for this high honor at the hands of that great association composed of sixteen states.

Dr. W. W. Crawford of Hattiesburg held his one hundred per cent attendance record at the Southern in St. Louis. He is the oldest past-president from the standpoint of service in this great association.

§

The December meeting of the Northeast Mississippi Thirteen Counties Medical Society will be held in Baldwyn and it bids fair to be a nice one. Dr. Stokes of Guntown is president and Dr. A. J. Stacy of Tupelo is secretary.

§

And now it appears that talcum powder may be very injurious when left in the abdominal cavity. It may account for adhesions in cases which we have not before understood. Substitutes are being provided.

§

Our Woman's Auxiliary continues to go forward. The Winona District has organized with Mrs. S. L. Bailey of Kosciusko as president and Mrs. Edgar Giles of Avalon as secretary. Mrs. J. K. Avent of Grenada is the councilor. This new organization will add strength and gracious spirit to the state association. The Woman's Auxiliary has a great opportunity before it. It has a definite duty to perform. A personal duty is to help the overworked doctor-husband through the strain of wartime, not keep him from work but help him do more and better work with greater safety to himself. The social worker is to play a big part in the practice of medicine in the future. The army sees this and is already utilizing her services. The medical profession should know better how to meet problems included in her province but, sad to say, the lay public has not been encouraged to relate social welfare with medical practice. The Woman's Auxiliary can help bring understanding to lay groups as well as to their husbands, along this line. In time medical schools will catch the vision and inaugurate chairs of instruction for the doctors in this field.

The social and the economical life of every patient must be duly considered in the treatment of his physical, mental, and moral ills. These ills can not be separated. We are delighted to see the doctors' wives joining hands in a helpful manner with the profession. Success and appreciation to them.

§

Dr. E. C. Carey of Dallas, Texas, one of the best known medical men in the nation, is using his talents and his means in an earnest effort to help solve the medical problems before us. We do not know his full plan, but it makes sense to abandon our cry against state medicine unless we can be resourceful enough to offer something better to meet the people's needs. The medical profession must show the way. Many areas in the United States will need government aid or aid from somewhere, in order to receive the best in medicine at this time. Doctors must be paid something for their services to this low income bracket. It is utterly foolish to think otherwise. We believe Dr. Carey has medical integrity and an honest mind. What he says should carry much weight and should be fully considered by the medical powers that be.

§

The medical service being rendered the boys on the front lines of battle in this war should convince the most stupid that in civil life as good service can be carried to isolated, poor, and congested areas if we have the will to do it.

§

Again we say that polished brass and tile floors do not heal wounds. It is lamentable to see them shining in many hospitals whose services are so far out of date. In a hospital and in a medical school the staffs and the faculty count most.

News and Comment

DEATH ENDS RESEARCH OF DR. ALEXIS CARREL

Dr. Alexis Carrel, 71, surgeon and biologist who won international fame for his medical findings, and invention of a mechanical heart in 1935 research with Charles A. Lindberg, died November 5.

His Paris office said Dr. Carrel, Nobel prize winner and author of the widely published "Man the Unknown," had been ill with a heart ailment for several months.

From 1906 to 1939, Dr. Carrel was a staff member of the Rockefeller Institute for Medical Research in New York.

He won the Nobel prize in 1912 for discovery of a technique for suturing blood vessels, a method that made transfusions commonplace, and for his success in transplantation of organs. During World War I, he helped develop the Carrel-Dakin antiseptic solution, credited with saving the lives of countless wounded soldiers, and avoiding thousands of amputations.

CLARKSDALE AND SIX COUNTIES ELECT

Dr. J. L. Nichols of Alligator was elected president of the Clarksdale and Six Counties Medical Society, succeeding Dr. W. H. Williams of Tunica. Dr. Guy Post of Clarksdale was reëlected secretary-treasurer.

The meeting was attended by 50 physicians and surgeons from Memphis and the Delta.

Vice presidents elected are Dr. H. L. Cockerham, Bolivar; Dr. I. P. Carr, Coahoma; Dr. A. C. Covington, Quitman; Dr. G. L. Biles, Tallahatchie, and Dr. J. P. Hitt, Tunica.

Dr. T. M. Dye was reëlected chairman of the medical legal defense. Dr. L. H. Brevard of Deeson was elected to the Board of Censors for three years.

Visiting doctors on the program were Dr. H. D. Rudner, Dr. E. M. Holder, Dr. D. H. Anthony of Memphis, and Dr. J. C. Culley of Oxford.

UROLOGY AWARD

The American Urological Association offers an annual award, not to exceed $500, for an essay (or essays) on the result of some specific clinical or laboratory research in urology. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years. All interested should write the secretary, for full particulars.

The selected essay (or essays) will appear on the program of the forthcoming June meeting of the American Urological Association.

Essays must be in the hands of the secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee, on or before March 15, 1945.

FORUM ON ALLERGY

The Seventh Annul Forum on Allergy will be held at the Hotel William Penn, Pittsburgh, Pennsylvania, on Saturday and Sunday, January 20-21, 1945. This is a meeting to which all reputable physicians are most welcome, and where they are offered an opportunity to bring themselves up to date in this rapidly advancing branch of medicine by two days of intensive postgraduate instruction. For further information, copies of the book and registration, write Jonathan Forman, Director, 956 Bryden Road, Columbus 5, Ohio.

ANNOUNCEMENT

Dr. J. T. Doster takes pleasure in announcing the opening of a department of pediatrics at the Doster Hospital in Columbus, Mississippi. The department will be under the supervision of Dr. J. L. Rubel who has been on the staff of the Department of Pediatrics, Washington University School of Medicine, for the past three years.

DOCTORS IN THE SERVICE

NOTE: All doctor members who are in good standing of the Mississippi State Medical Association but who are with the armed services, are still due to receive the *Mississippi Doctor.* Please help us keep mailing addresses up to date. Notify the *Mississippi Doctor,* Booneville, Miss.

Dr. J. H. Fox, Lieut. Col., U. S. Medical Corps, is now retired from service with the Army, having reached the statutory age limit after four years of service. Dr. Fox is associated with Dr. H. C. Sheffield in Jackson in the general practice of medicine. The offices are 712 Lamar Building, Jackson,Miss.

From down in the Pacific Dr. David R. Minter, Major, M. C., gives a slant on life on the front, but is still thinking in terms of medical problems back in Mississippi. He writes:

"My duties for the past few months have kept me more or less on the go, so that other than first class mail has been rather slow in catching up with me.

"I have found that my four years of country practice in Bolivar County, where I was thoroughly introduced to malaria and atabrine, have stood me in good stead in my work in this theater, since I have been primarily concerned with malaria control for almost two years now. Malaria control, as practiced by the Army, is an expensive proposition, and in thinking of the future of Mississippi, I can see only a gradual elimination of malaria as the economic condition of our rural population is improved.

"I do not share the opinion of the more optimistic writers and speakers that the war will soon be over, for although we have come a long way in the past year, there is still a long road ahead. It is certainly encouraging, however, to see the evidences of America's resourcefulness and productive ability in the flood of equipment of all kinds that we are seeing out here. It is true that we do complain about the food, the mud and dust, and the lack of a normal social life, but I am continually amazed at the keen sense of humor which the average American soldier displays under any and all conditions. You can't beat that spirit."

His address is: Hq. Sixth Army, APO 442, San Francisco, California.

Deaths

DR. A. K. NAUGLE

Dr. Andrew Kincannon Naugle, West Point, Mississippi, died October 29. He was born at Verona, Mississippi, December 25, 1878. He received his medical education at Tulane University, New Orleans, Louisiana, and University of Nashville, Nashville, Tennessee.

Besides his wife, the former Miss Elizabeth Calvert, to whom he was wed in 1906, he leaves three sons, Maj. A. K. Naugle, Jr., Pacific veteran now stationed at Anniston, Ala.; Dr. Tom Calvert Naugle of Columbus, Miss., and Lieut. J. B. Naugle, overseas in the European theater; four sisters, Mrs. H. G. Caradine of McCondy, Miss.; Mrs. W. H. Ball of Tylertown, Texas; Mrs. Esther Connell of Dallas, Texas, and Mrs. Sara Donaldson of Oklahoma City, Okla., and a brother, W. T. Naugle of McCondy. Three grandchildren also survive.

He practiced at the nearby community of Abbott for 17 years before moving to West Point where he practiced actively up until about a year ago. He was a member of the Board of Stewards of the Methodist Church, a director of the Bank of West Point, and for a number of years served on the city school board. At one time he was Clay County's health officer. He also served on the Pension Board of the Spanish-American War Veterans.

DR. J. H. WOOD

Dr. John Harrison Wood of Georgetown, Mississippi, died at his home. He was born at Rio, Mississippi, July 9, 1870. He received his medical education at the Memphis Hospital Medical College, Memphis, Tennessee. He graduated in 1904 and was licensed to practice in 1902.

DR. H. T. CUMING

Dr. Henry Thomas Cuming, age 65, died suddenly at the family residence at Pace, September 29, at 10:00 a. m. He was a native of Corinth and moved to Pace in 1919. Dr. Cuming served overseas in World War I for 17 months, and has served as vice-commander and service officer for the Glenn Crosby American Legion Post No. 165 of Cleveland. He was a graduate of the University of Tennessee.

Funeral services were held from the home in Pace on Sunday, October 1, at 10:00 a. m., Rev. E. F. Tucker, assisted by Rev. E. G. Evans, officiating. The body was forwarded to Gloster for interment Monday, October 2, with the Thweatt Funeral Home in charge of arrangements.

Surviving are his wife, Mrs. Cecile Todd Cuming; two daughters, Mrs. Lewis Nachod, and Mrs. John Dent of New York City.

DR. J. R. PRIEST

Services were held for Dr. John Robert Priest, Jr., who died at his home in Houston, Miss., Oct. 4.

Dr. Priest, the son of the late Dr. J. R. Priest, Sr., and Mrs. Lorena McIntosh Priest, was born in Houston in 1912. He attended Millsaps College, graduated from the University of Mississippi and received his M. D. degree from the University of Tennessee. He was a member of Theta Kappa Nu fraternity. Following his graduation Dr. Priest interned at Morningside Hospital in Tulsa, Oklahoma, and Mobile Charity Hospital, Mobile, Alabama, after which he was associated with his father in local practice, and later serving with the State Board of Health in Kemper, Wayne, and Clark counties until his health forced him to retire.

In 1933 he was married to Rebecca Marie Rhinehart of Octeha, Oklahoma. Surviving are his wife, two children, Joe Ellen and Bobby Priest, his mother and a brother, Mac Priest, all of Houston.

DR. W. P. SHACKLEFORD

Dr. W. P. Shackleford, 56, physician and member of the Board of Aldermen of Hollandale, Miss., died at the hospital there of a heart ailment, September 8.

Born at Midnight, Miss., he lived at Hollandale for 24 years. He was prominent in the civic affairs of Washington County. He was a Mason and a Shriner. He was a graduate of the University of Louisville.

He leaves his wife, an adopted daughter, Mrs. Jimmy Walker, Stoneville; a brother, Dr. E. C. Shackleford, Hollandale, and three sisters, Mrs. A. J. Royal and Miss Anna D. Shackleford, Midnight; and Mrs. J. P. LaBarre, Yazoo City.

DR. D. A. PETTIT

Funeral services for Dr. D. A. Pettit were held in Vicksburg on September 22.

Born in Warren County sixty years ago, Dr. Pettit began medical practice over thirty years ago after his graduation from Tulane University in 1906. His office has been on the second floor over the Corner Drug Store at Washington and China streets in Vicksburg.

He is survived by his wife, one daughter, and a granddaughter; three sisters, a brother and an adopted brother.

DR. P. B. RUSSELL

Dr. P. R. Russell, prominent doctor and citizen of east central Mississippi, died at the Baptist hospital in Jackson, September 25, after an illness of several months. Funeral services were held at the residence in Carthage. Dr. Russell was graduated from Tulane University, New Orleans, in 1899.

He is survived by his wife, two daughters, Mrs. James Grant Thompson and Mrs. Raymond S. Harris, both of Jackson; two grandsons, Russell Douglas Thompson and James Grant Thompson, III.

DR. A. C. PENNINGTON

Dr. Alexander Cobb Pennington of Steens, Mississippi died at his residence October 1, 1944, as a result of a heart attack. He was born in Vernon, Alabama, on May 30, 1880. Dr. Pennington received his medical education at the Chattanooga Medical College, Chattanooga, Tennessee. He graduated in 1908 and received his license in Mississippi in 1908.

DR L. W. WILSON

Dr. Lyman West Wilson, R.F.D., Collins, Mississippi, was buried August 28. He was born in Jones County, Mississippi, October 7, 1880. Dr. Wilson was educated at the Memphis Hospital Medical College, Memphis, Tennessee, and graduated in 1905. He was licensed in Mississippi in 1906.

Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—**James G. Thompson, Jackson.**

Ear, Nose and Throat—**Edley Jones, Vicksburg.**

Obstetrics and Gynecology—**J. F. Lucas, Greenwood.**

Orthopedics—**Thomas H. Blake, Jackson.**

Pathology and Clinical Pathology—**John C. Henthorne, Vicksburg.**

Pediatrics—**Harvey F. Garrison, Jackson.**

Public Health—**Felix J. Underwood, Jackson.**

Radiology and Roentgenology—**Karl O. Stingily, Meridian.**

Surgery—**W. H. Parsons, Vicksburg.**

Urology—**Temple Ainsworth, Jackson.**

DERMATOLOGY

Archives of *Dermatology and Syphilology.* Vol. 50, No. 2, P. 125, 126, and 127; August 1944.

A TREATMENT FOR PEDICULOSIS CAPITIS. William A. Davis, J.A.M.A. 123:825 (Nov. 27) 1943.

A lotion containing 40 per cent of the monophenal ether of ethylene glucol, 30 per cent of ethyl alcohol, 25 per cent of water and 5 per cent of methyl salicylate has proved to be satisfactory for the treatment of pediculosis capitis. This preparation rapidly kills lice and nits; it costs little, and is not irritating.

CUTANEOUS REACTIONS DUE TO THE BODY LOUSE (PEDICULUS HUMANUS). Samuel M. Peck, Willard H. Wright and James Quincy Gant, Jr., J.A.M.A. 123: 821 (Nov. 27) 1943.

There are apparently two components to the "louse bite reaction": the purpuric element due to the act of feeding and an inflammatory reaction following sensitization. Repeated exposures to the body louse will result in the development of a dermal hypersensitivity to it and its feces in the majority of persons exposed.

CUTANEOUS MELANOMAS:A CLINICAL STUDY OF SIXTY CASES. J. R. Driver and Donald N. MacVicar, J.A.M.A. 121:413 (Feb. 6) 1943.

Of a series of 60 patients with melanomas, 25 represented themselves for treatment comparatively late, with relatively advanced malignant growths. Only 2 of them are known to be alive more than five years later. Of the other group of 35 patients seen in dermatologic practice, 17 survived from seven to eighteen years. These patients were seen early in their disease, and the great majority were free of metastatic dissemination when they were first treated. The authors recommend early diagnosis and thorough destruction of the primary lesion either by electro-cauterization or by radical excision with the scalpel. If the lymph nodes are clinically involved, the chances of cure are practically nil. Melanomas on the fingers, hands, arms, feet and legs should be treated by amputation followed by surgical dissection of the regional lymph nodes in every case. The complete scalpel excision or thorough destruction of flat non-hairy pigmented nevi (junction type nevi) from areas subject to chronic irritation is the best form of prophylaxis for cutaneous melanomas.

HYPERSENSITIVITY PRODUCED BY THE TOPICAL APPLICATION OF SULFATHIAZOLE. M. H. Coen, H. B. Thomas and A. C. Kalisch. J.A.M.A. 121: 408 (Feb. 6) 1943

The authors report two cases of varicose eczema treated locally with 5 per cent sulfathiazole ointment in which was produced a generalized eruption that was produced by the administration of small doses of sulfathiazole by mouth. They believe that the topical application of sulfathiazole can arouse a hypersensitivity resembling an allergic phenomenon and that this hypersensitivity can be affected by continuation of the use of the drug either locally or by ingestion. The older methods of treatment of varicose ulcer should always be tried before sulfathiazole therapy is instituted.

SULFATHIAZOLE IN ECZEMATOUS PYODERMA: SENSITIZATION REACTION TO SUCCESSIVE LOCAL AND ORAL THERAPY: REPORT OF TWELVE CASES. Clarence S. Livingood and Donald M. Pillsbury, J.A.M.A. 121:406 (Feb. 6) 1943.

The authors report 12 cases of sensitization to sulfathiazole in patients who had a localized eczema with a secondary pyogenic element. The reaction is probably produced by rather prolonged application of the sulfathiazole ointment (more than five days) and becomes manifest when sulfathiazole is given by mouth. The symptoms occur after the administration of a small amount of sulfathiazole and within a period of a few hours. The course of events was similar in all cases: (a) prompt development of constitutional symptoms, including malaise, chilliness, and elevation of temperature, (b) local exacerbation of the lesions under treatment, and (c) a generalized hematogenous "id"-like eruption, which was always pruritic and explosive in its onset. The symptoms recur when sulfathiazole is taken by mouth a second or third time. On the basis of an experience with more than 1,000 patients for whom local sulfathiazole therapy to the skin has been used, it is considered that (1) such therapy should not be employed for more than five days, (2) the indications for such therapy should be carefully considered and (3) local sulfathiazole therapy is highly effective in treatment of frank superficial pyodermas but it is less effective against chronic eczematous processes.

PEDIATRICS

THE RH FACTOR — German, William McKee — *Kentucky Medical Journal,* 42:167, (June) 1944.

"The RH factor gets its name from the rhesus monkey. Monkey erythrocytes carry an antigenic factor, an agglutinogen that 85 per cent of humans possess. Those whose cells carry this factor are called Rh positive, those who do not are Rh negative.

"Not only has the Rh factor been blamed for icterus neonatorum, hydrops, and stillborn babies, but also for an undetermined number of abortions, and some of the mysterious reactions which have occurred while using donors who were compatible by the ordinary methods of blood matching."

For purpose of simplicity, the blood may be divided into two elements, erythrocytes and plasma. "Our erythrocytes carry several factors which are determined by the laws of heredity. These factors behave as antigens. The plasma contains another set of factors which behave as antibodies. The factors carried by the red blood cells we term agglutinogens, those carried by the plasma, agglutinins. When the blood of two individuals is mixed, agglutinogen which meets its specific agglutinin, if present, produces a demonstrable reaction, agglutination of red blood cells. In some instances red cell hemolysis takes place as well as agglutination.

"The Rh factor is of proved importance in transfusion reactions and in erythroblastosis fetalis.

"Plasma normally contains agglutinins for the major blood groups, A, B, and AB. It normally contains no agglutinins or lysins for any other of the factors, including Rh.

"Under two sets of circumstances plasma will develop agglutinins for the Rh factor.

"1. Following repeated transfusions of blood from Rh positive donors into Rh negative recipients."

"2. In pregnancies, where the mother is Rh negative and the father is Rh positive.

"In these days of blood banks, it is not uncommon for patients to receive several transfusions during an illness. In spite of perfect blood group compatibility as judged by the ordinary typing criteria serious reactions may take place, particularly after the lapse of a few weeks since the last of a series of blood transfusions. Invariably these patients are Rh negative, the donors Rh positive. The patient receiving by transfusion Rh positive cells (antigen) develops in his blood plasma (by iso-immunization) anti-Rh agglutinins. These antibodies on subsequent transfusions of Rh positive blood may produce serious reactions. The fact that some reactions are mild may be explained by the variable titre of the patient's agglutinin on the one hand, and by the quantitative variation of the donor's Rh factor on the other. But it must be remembered that the repeated use of weak Rh positive donors may produce high titre anti-Rh agglutinins in some sensitive Rh negative patients.

The author says "Putting these phenomena to practical application, the following advice is justified.

"1. When repeated whole blood transfusions are contemplated, the Rh factor should be determined on both the recipient and the donors.

"2. If the recipient is Rh negative, only Rh negative donors should be employed.

"3. In doubt, or when urgency or circumstances preclude Rh factor tests, plasma should be used since it may be employed regardless of ordinary blood groups or Rh factor.

"4. The recipient of repeated blood transfusions should be warned that he is Rh negative, and should, if in the military, carry Rh negative on his identification tags.

"5. Hospitals and blood banks should either store Rh negative blood or have a list of normal Rh negative donors available for emergencies."

In a pregnancy in which the father is Rh positive, and the mother Rh negative, the fetus will inherit the Rh factor in proportion determined by whether the father was himself homozygous or heterozygous. First pregnancies, in such unions, are usually uneventful. Subsequent pregnancies may end disastrously in erythroblastosis, neonatal death, stillbirth or abortion.

It is said that "the percentage of such cases has been estimated at about 1 in 1,000 pregnancies. That the number is not greater, may be due to several factors:

"1. In only about 15 per cent of marriages, will the mother be Rh negative, the father Rh positive.

2. "There are many one child marriages, so that the Rh factor has not had full opportunity to operate.

"3. The Rh factor does not operate disastrously in every pregnancy because iso-immunization is either weak, or does not take place.

"4. Were Rh blood tests performed in all stillbirths, neonatal deaths, and abortions, the percentage 1 to 1,000 might actually be higher."

During the progress of pregnancy, in an Rh negative mother in whom the fetal red cells are Rh positive, the antigenic factor, Rh enters the maternal circulation by a mechanism as yet not fully understood. Repeated circulatory accidents in the placental barrier is a reasonable explanation.

"In response to this Rh antigen, by a process of iso-immunization, the maternal tissues elaborate an anti-Rh antibody, behaving as an agglutinin and as an hemolysin. This maternal anti-Rh factor, being humoral, not cellular, is resorbed through the placental barrier to enter the fetal circulation. Here it exerts its specific destructive action against the fetal red blood cells.

"In the ensuing struggle the fetus may die in utero, it may be born with visible changes, only to die, or it may be born with the usual manifestations of erythroblastosis, icterus or hydrops. In the struggle to survive, the fetus may attempt to compensate for its blood destruction by hypertrophy of the placenta and by hyperplasia of its blood-forming tissues. Such an infant is anemic, shows large numbers of erythroblasts in its circulation, and at autopsy presents hemorrhagic phenomena and extramedullary hemopoiesis in the viscera. Because of the hemorrhagic phenomena, vitamin K administered on delivery has had beneficial results. Many of these infants, alive at birth, may be saved by prompt and repeated small transfusions. Of necessity, these transfusions should be from normal Rh negative donors."

Based upon a knowledge of a behavior of the Rh factor, one is justified in listing the following do's and don'ts:

The author emphasized the following points:

"1. In a union in which there is a story of repeated abortions, stillbirths, or neonatal deaths, Rh factor tests should be made upon both parents.

"2. Should an Rh negative mother require transfusion in such a situation, she should receive Rh negative blood of the same major group. Under no circumstances should she be given blood from an Rh positive donor.

"3. In the transfusion of the infant, normal Rh negative blood should be used. The mother should in no case be the donor, since her blood contains the destructive anti-Rh agglutinin. The father likewise should be rejected as a donor.

"4. Rh negative women should avoid mating with Rh positive husbands.

"5. Rh factor tests would be desirable in every mating.

"6. Because experience has shown that there is a fall in the titre of anti-Rh agglutinins with the lapse of time, Rh negative mothers should be cautioned against pregnancies in rapid succession, and should be advised to allow five years to elapse in the hope that a pregnancy so spaced may terminate normally.

"7. In anticipation of the delivery of an Rh negative—Rh positive union, Rh negative blood or an Rh negative donor should be available for immediate use.

"8. An Rh negative mother should be warned of the dangers of subsequent transfusions, by donors who have not been proved Rh negative."

"A knowledge of the operation of the Rh factor should be not only an aid in diagnosis, but should make a definite contribution to reducing infant mortality."

COMMENT

This is probably one of the most important and far-reaching subjects and one in which there has been a world of research and scientific developments in the past several years. I commend it to be carefully read by each physician in Mississippi.

H. F. G.

PUBLIC HEALTH

A PROBABLY NEW TYPE OF NONMANNITOL-FERMENTING SHIGELLA, by Maud Gober, Virginia Stacy and Mary Woodrow. The *American Journal of Hygiene,* 40: 209-211, September, 1944.

The characteristics of what is probably a new type of nonmannitol-fermenting *Shigella* are described. The organism is a nonmotile, gram-negative bacillus indistinguishable morphologically from other members of the Shigella group. The cultural characteristics, however, are distinctive. Of the seven test substances used: xylose, lactose, dulcitol, mannitol, rhamnose, saccharose, and sorbitol, the organism fails to ferment in any of these in 24 hours of incubation. However, the sorbitol is fermented between the fourth and sixth days. No indol is produced and tests for hydrogen sulfide are negative. There is no reaction in Simmons' citrate or Jordan and Harmon's sodium potassium-tartrate media.

Suspecting that an unusual organism was being dealt with, an hemologous antiserum was prepared from the first organism isolated, the culture being designated 8524. Cultures of this type isolated later were referred to as *Shigella* 8524.

Antigenically these nonmannitol-fermenters are homogeneous, all *Shigella* 8524 strains being agglutinated by a specific serum prepared against only one strain. All cross-agglutination tests failed to show any relationship between the 8524 strains and any of the *paradysenteriae* (Flexners), *dysenteriae* (shiga), *ambigua* (Schmitz), *sonnei, alkalascens,* or *dispar* strains.

A five-year study, 1939-1943, of these organisms yielded 47 cultures, isolations being made from 27 cases, eight foodhandlers, two typhoid case releases, three known typhoid carriers and seven contacts.

The frequency of *Shigella* 8524 with that of other Shigella isolations during the same five-year period were:

S. paradysenteriae (Flexners)	942
S. Newcastle	75
S. dysenteriae (Shiga	26
So. sonnei	242
S. ambigua (Schmitz)	34
S. alkalescens	529
S. dispar	23
Total	1917

COMMENT

Since the publication of this study on a new type *Shigella,* much interest from other laboratories has been manifested by inquiries for cultures and antiserum in order that studies may be made of atypical organisms isolated. Reports of the incidence of *Shigella* 8524 in other states and countries have been made, the results of which may aid the laboratory, not only in this state, but in others in giving the physicians a more accurate report in their diagnosis of *Shigella.*

Maud Gober, Bacteriologist
Division of Laboratories

A new revision of *Rules and Regulations Governing Reportable Diseases* has just been released by the Division of Preventable Disease Control, according to Dr. A. L. Gray, Director. Changes incorporated into the revised edition are noted as follows:

1. Section 12, Rules and Regulations Governing Morbidity Reports, gives health officers authority to require suspected cases of communicable diseases to have examinations under similar authority now had in regard to venereal diseases.
2. Under Diphtheria an important change has been made permitting release of contacts of cases upon securing one negative nose and throat culture rather than two. This will reduce the amount of travel without jeopardizing control too much.
3. Important changes have been made in the requirements of isolation of meningitis cases and the quarantine of their contacts. This change in isolation and quarantine periods is possible through the use of the sulfonamide drugs.
4. The addition of the section of Occupational Disease requires reporting of such diseases.
5. Under syphilis and gonorrhea a new section has been added which gives health officers authority to require patients or guardians of minors who are suspected of having these diseases to have such suspects examined. This section stipulates how legal proceedings may be instituted.

A copy of the revised *Rules and Regulations Governing Reportable Diseases* may be had upon request to the State Board of Health.

State Board of Health

Felix J. Underwood, M. D.

THE PHYSICIAN'S ROLE IN COMPILATION OF PUBLIC HEALTH STATISTICS

CELINE McGINN, Supervisor
Public Health Statistics

A salute to the physician of Mississippi! To his zealousness in reporting to public health authorities cases of infectious disease, the state of Mississippi owes thanks that it has been rid of all the major plagues of mankind; to his promptness in reporting births which occurred within the state, can be attributed the fact that Mississippi leads the South in completeness of birth reporting; to his punctiliousness in reporting deaths is due the fact that there is available today detailed data on causes of death in Mississippi since 1913 thus enabling the medical and public health professions to point with pride to concrete evidence of progress in preventing disease and prolonging life.

Because of this wealth of material on the health status of Mississippians assembled from physician's reports, and because of the ever increasing demand on the part of the medical profession for information on this subject as it relates to past, present and future, there has been established recently in the Administrative branch of the Mississippi State Board of Health a Public Health Statistical Service. This service is designed primarily to collect and study data relating to the vital events of life — births, deaths, illnesses, marriages, divorces — and the population giving rise to these events as well as the facts which influence these events.

The Public Health Statistical Service is closely linked to the Division of Vital Statistics and the Division of Preventable Disease Control. Dr. R. N. Whitfield directs the Division of Vital Statistics and it is through this Division that certificates of births, deaths, stillbirths, marriages and divorces are filed. It is to the Division of Preventable Disease Control, under the direction of Dr. A. L. Gray, that reports of communicable diseases are made.

The specific functions of the Statistical Service are two-fold; namely, the mechanical processing of raw data obtained from birth, death, stillbirth, marriage, divorce and morbidity records through the use of the International Business Machines, and secondly, the application of statistical methods for study and analysis of facts as revealed by the tabulations. Relating this data to data of social and economic significance public health authorities can plan with private physicians and with social and economic groups programs of lasting benefit to the people of Mississippi. The contribution to such planning, however, which the Public Health Statistical Service can make will be as valuable as data furnished on vital records is reliable. Thus, in the future as in the past, the Mississippi physician will chart the course which public health is to follow in its program of preventive medicine.

POSTGRADUATE MEDICAL EDUCATION

Ten Mississippi physicians took advantage of fellowships offered through the State Board of Health and attended an interesting and helpful course in Internal Medicine held at Tulane University School of Medicine, November 6-11. The comments and letters of appreciation received from physicians who have taken similar courses are evidence that they have proved a real stimulus to keeping abreast of current advances in the field of medicine and as a result the quality of medical service being rendered has been improved. The refresher course has undoubtedly met a real need.

Giving the course in Internal Medicine, November 6-11, were members of the staff of the Tulane faculty of the School of Medicine and two distinguished guest lecturers, Dr. John A. Kilmer, Director of the Research Institute of Cutaneous Medicine, formerly professor of medicine at Temple University, and author of some outstanding books; and Dr. Cyrus C. Sturgis, professor of medicine at the University of Michigan, a leading authority on diseases of the blood and nutritional diseases.

The course included ward rounds and demonstrations at the Charity Hospital outpatient clinic and clinico-pathologic conferences. In addition, there were round table discussions on such subjects as syphilis, hypertension, nephritis, arteriosclerosis, tropical diseases, diseases of the blood, nutritional disturbances, and a symposium on diseases of the heart.

Mississippi physicians attending the course included: Dr. E. C. O'Cain, Winona; Dr. R. L. Fowler, Marion; Dr. B. B. Harper, Itta Bena; Dr. John A. Mead, Hattiesburg; Dr. J. D. Green, Brooksville; Dr. W. L. Little, Wesson; Dr. W. H. Frizell, Brookhaven; Dr. R. A. Clanton, Grenada; Dr. W. H. Watson, Brandon, and Dr. L. C. Herrington, Terry.

PREVALENCE OF COMMUNICABLE DISEASES IN MISSISSIPPI

	Sept. 1944	Sept. 1943	Sept. 5 yr. avg.
Acute poliomyelitis	34	0	15.2
Bacillary dysentery	1018	826	262.6
Dengue	2	0	1.0
Diphtheria	81	37	51.6
Influenza	2074	2045	1733.2
Measles	117	174	162.0
Meningococcus meningitis	9	6	4.4
Other forms meningitis	5	2	2.4
Pellagra	248	252	239.8
Pneumonia	565	599	372.4
Pulmonary tuberculosis	232	101	136.6
Scarlet fever	43	30	45.6
Smallpox	0	0	1.0
Tularemia	4	1	1.8
Typhoid fever	25	23	25.2
Typhus fever	17	21	13.8
Undulant fever	6	4	3.4
Whooping cough	898	783	691.4

DIFFERENCE

Nit: What's the difference between learning to drive a car and learning to play golf?

Wit: Easy. When you're learning to play golf you don't hit anything.

—Selected

PHILIP MERIWETHER LEWIS, M.D.
Practice Limited to
OPHTHALMOLOGY
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EXECUTIVE BOARD MEETING

The fall executive board meeting of the Woman's Auxiliary to the Mississippi State Medical Society was held in Vicksburg, October the seventeenth, with the president, Mrs. Laurance Clark.

The members of the board were entertained at a luncheon at the Old Southern Tea Room. A beautiful arrangement of roses was used in the center of the table.

Following the luncheon a business meeting was held in the home of Mrs. Clark. Reports of the officers and councilors were given and plans for the year were discussed.

Officers and councilors in attendance included: Mrs. Stanley Hill, Corinth, president-elect; Mrs. H. C. Ricks, Jackson, vice-president; Mrs. George Owens, Jackson, recording secretary; Mrs. Harvey Garrison, Jackson, History and Archives; Mrs. A. Street, Vicksburg, Legislation; Mrs. Hugh Johnston, Vicksburg, War Participation: Mrs. J. K. Avent, Grenada, councilor, Fourth District; Mrs. J. P. Culpepper, Hattiesburg, councilor, Seventh District; Mrs. A. B. Harvey, Tylertown, councilor, Eighth District; Mrs. S. B. McIlwain, Pascagoula, councilor, Ninth District.

At the conclusion of the business session the members adjourned to attend a tea at the home of Mrs. Sidney W. Johnston. This tea inaugurated the fall program of the Issaquena, Sharkey-Warren Medical Auxiliary.

Dr. John Henthorne of the staff of the Vicksburg Hospital was guest speaker on this delightful occasion.

The dining room was a picture of loveliness. A lace and Madeira cloth, a center piece of lavender chrysanthemums, crystal candelabra and tapers were used on the table. Red roses and bronze chrysanthemums in artistic arrangements added to the beauty of the room. Mrs. B. B. Martin poured tea from a handsome silver urn. Delicious sandwiches, nuts, olives and cookies were served. Mrs. Preston Herring, Mrs. Hugh Johnston, and Mrs. Laurance Clark were co-hostesses with Mrs. Sidney Johnston.

This meeting brought together the local and state members who enjoyed the mutual opportunity of exchanging ideas and inspiration.

WINONA DISTRICT ORGANIZES

The Woman's Auxiliary of the Winona District Medical Society was organized at Grenada Wednesday afternoon, October 18, with six counties out of the seven represented.

The charter members of the auxiliary are: District Councilor: Mrs. J. K. Avent, Grenada; president, Mrs. S. L. Bailey, Kosciusko; secretary-treasurer, Mrs. Edgar Giles, Avalon; first vice-president, Mrs. H. K. Curry, Eupora; historian, Mrs. W. G. Brock, West; Doctor's Day chairman, Mrs. C. H. Holman, Carrolton; *Hygeia* chairman, Mrs. E. C. O'Cain, Winona. Mrs. S. J. Hooper of Jackson was also included in the membership.

The meeting was held in the home of Mrs. J. K. Avent, with Mrs. Stanley Hill, president-elect of the State Auxiliary as special guest. Mrs. Hill gave the history of the national organization and explained the aims and purposes of the auxiliary.

Dues of $2.00 were collected, which includes the subscription to the National Auxiliary publication, *The Bulletin.*

The auxiliary will meet jointly with the Winona District Medical Society.

CENTRAL MEDICAL AUXILIARY

Central Medical Auxiliary members met November 6 in the Red Cross room at the fairgrounds in Jackson to make dressings for Foster General Hospital.

Following a delicious luncheon in the canteen, Mrs. W. R. Bethea, president, conducted a brief business period, during which the members voted to work at Red Cross Production Center the first and third Tuesdays of each month. Mrs. Sam Parker of Foster General Hospital thanked the members for undertaking this project.

Those who gathered in the workroom included Mrs. W. R. Bethea, Mrs. Lauch Hughes, Mrs. A. G. Wilde, Mrs. J. O. Segura, Mrs. Carter O'Ferrall, Mrs. Temple Moore, Mrs. George E. Riley, Mrs. Frank Carr, Mrs. J. P. Wall, Mrs. Lawrence Long, Mrs. R. B. Price, Mrs. Sam Parker, Mrs. E. Horgan, Mrs. George Owen, Mrs. A. L. Gray, Mrs. I. C. Huggins, Mrs. Walton Lipscomb, Mrs. Percy Hudson of Utica and Mrs. I. B. Trapp of Brandon.

CLARKSDALE AND SIX COUNTIES MEDICAL AUXILIARY

The Clarksdale and Six Counties Medical Auxiliary met November 8 at the Clarksdale Country Club. A luncheon was served after invocation by Mrs. E. L. Rawles.

Following the luncheon the president, Mrs. T. G. Hughes, called the meeting to order. Her welcoming address was followed by the reading of the minutes and financial report which was approved. The motion was made and passed to send $17.00, previously collected, to the Preventorium.

Mrs. Julius L. Levy, chairman of the program committee, introduced Mrs. L. J. Clark of Vicksburg, president of the state organization, who gave the main address of the afternoon. Mrs. J. D. Simmons of Cleveland, state treasurer, gave a brief report, and Dr. Victoria Kimbrough gave a very interesting talk on army hospitals and treatment of veterans who have lost limbs in the war.

Members present included: Mrs. T. G. Hughes, Mrs. I. W. Barrett, Mrs. E. L. Rawles, Mrs. W. H. Brandon, Mrs. J. L. Levy, Mrs. E. L. Wilkins, Mrs. D. H. Ramey.

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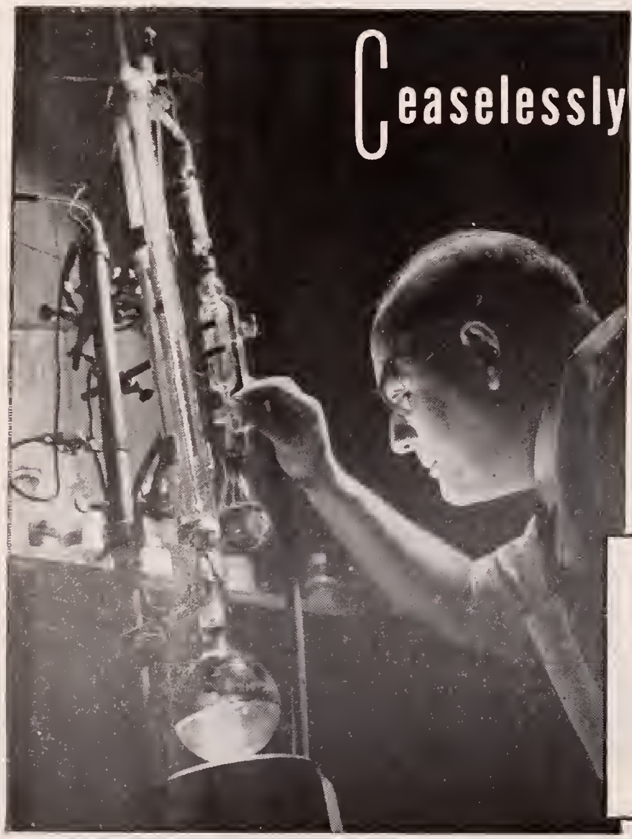

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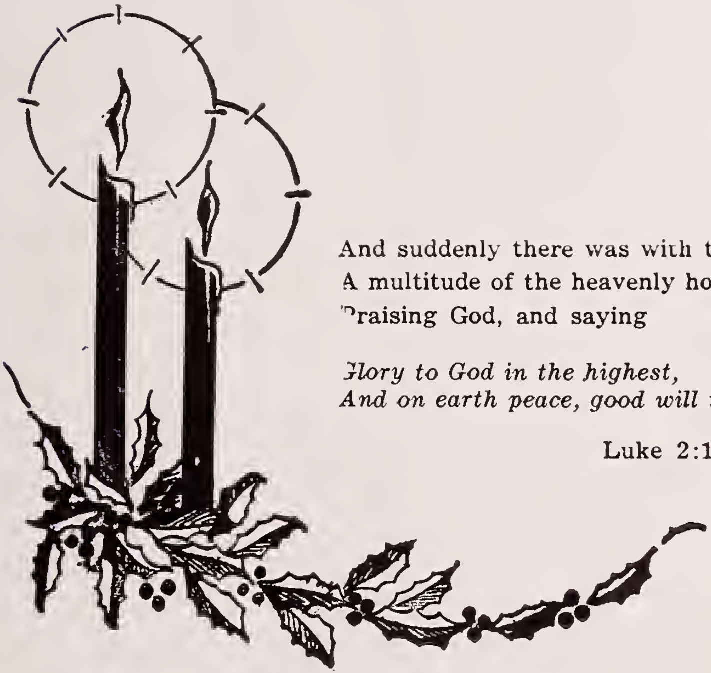

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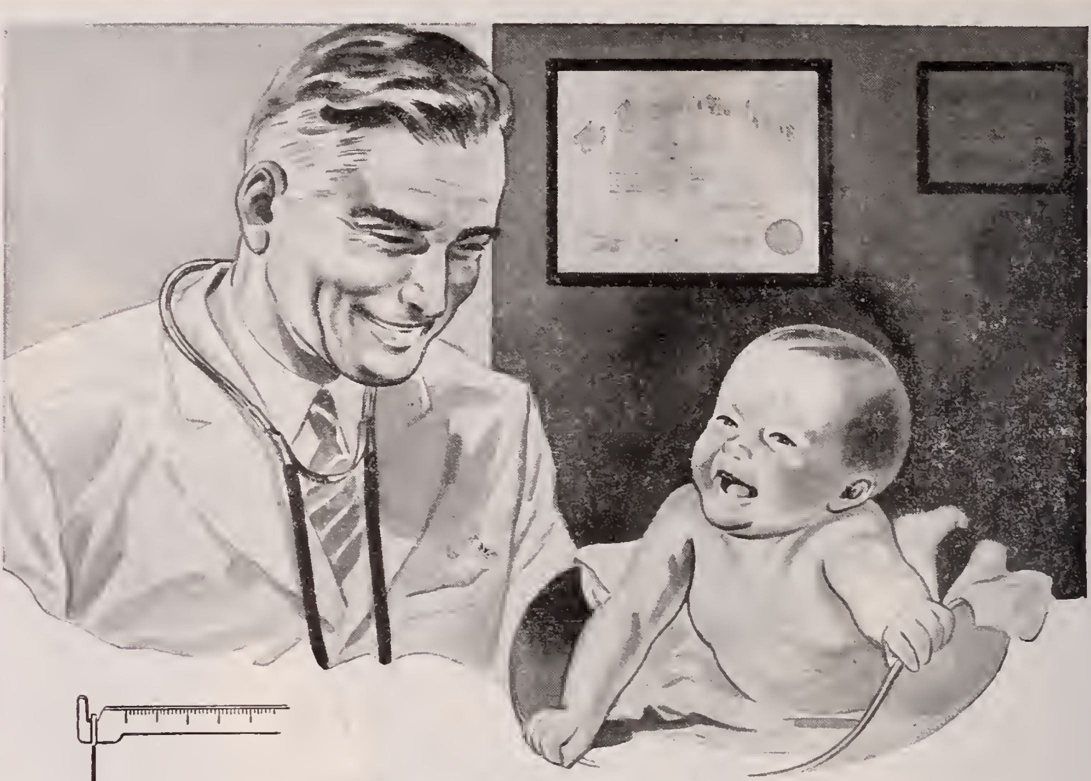

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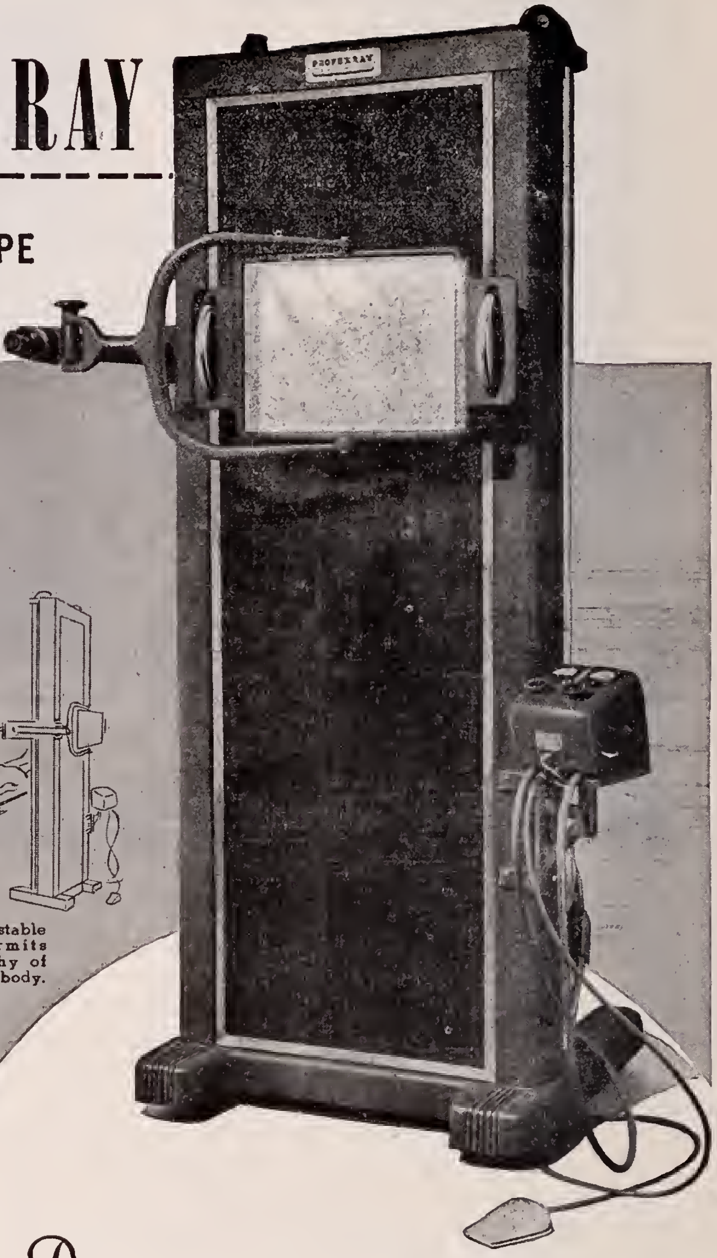

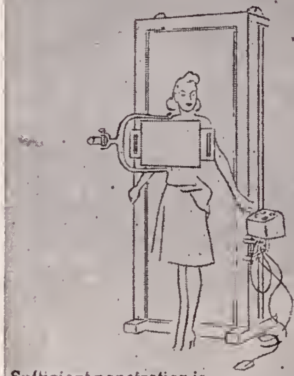

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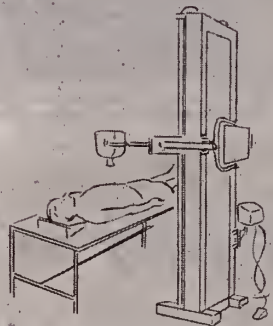

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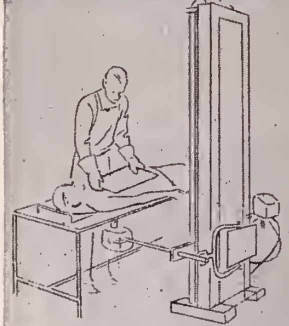

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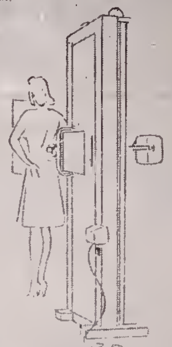

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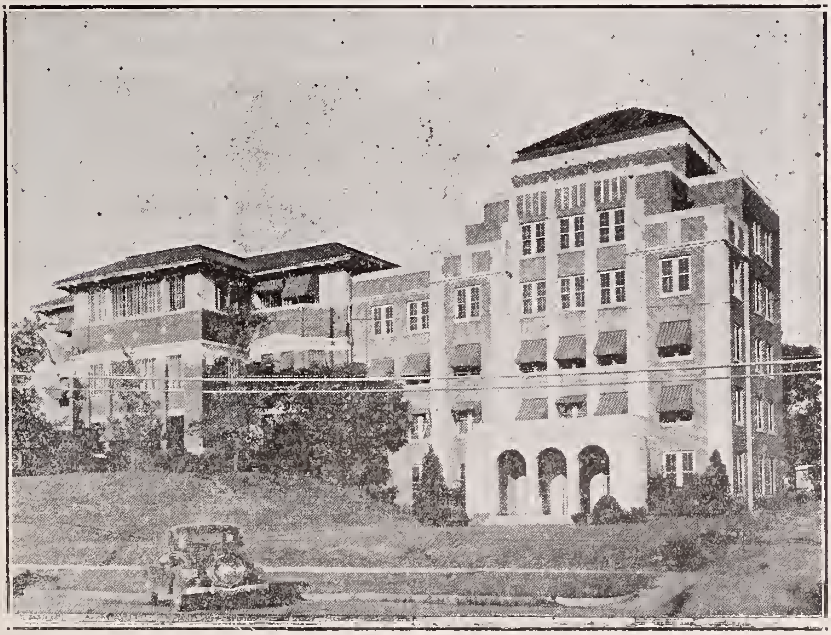

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—Tusser

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Local Responsibility in Public Health Administration*

JOHN J. SIPPY, M.D., F.A.P.H.A.

District Health Officer, San Joaquin Local Health District, Stockton, California

When Dr. Underwood, in completing the duties of the President of the American Public Health Association, comes to the close of his three-day conference and relinquishes the gavel, he will appear in a typical role, namely that of a state health officer indulging in the pastime of transferring an added responsibility to a local health officer. On that topic, you should know, we local health officers are given to more or less chronic grouching. We never weary of moaning about the multiplicity of new activities and duties which federal and state bureaus of health prescribe for us.

Perhaps, because our days are rounds of endless trivialities, which limit our horizon and obscure our perspectives, it is difficult for us to envision the panorama of purpose and plan of the general staff of nation and states, whose overall recognizance and knowledge of all sectors permit the planning and direction of our activities in coördinated fashion. We realize of course that a sound physical status for all of our population is a first requisite of national defense, and that each of our communities, as a part of the whole, must exert itself to insure this status. Nevertheless, at times we entertain fancies that we are victims of an unfair division of labor, funds and personnel.

We complain of the demands of increased population. Had normal conditions prevailed since 1940, some three or four millions of people would have added to our local responsibilities. Instead some twelve million persons in the armed forces, for whose health and welfare the Federal Government has assumed responsibility, have been subtracted from our concern. If, in certain areas where industries pertaining to the war effort have been intensified there is some justification for complaint of the population overload, then it must follow that in many other areas there is population loss and one might expect lessening of local public health demands. In addition we must not forget that industry itself has assumed responsibility for the maintenance of health of several millions of workers who were formerly dependent on public agencies for health protection. One might mention other reliefs in population demands upon us. It is not, therefore, increased population of which we have a right to complain.

We speak of new public health problems. I doubt if we mean that, for on analysis, with only minor exceptions, there are no new problems. There are only new facets of old problems. Always mothers have had babies, always children have suffered from childhood infections, always large numbers of persons have been malnourished. Always, too, women have engaged in manual labor, and the fact that they have been transplanted from the drudgery of home and field to the mechanical processes of industry does not necessarily bespeak greater physical hazards or deterioration. What we do mean by new health problems is only a clearer recognition of old ones and a call for greater application of effort toward solution of them.

Several decades ago, it was obvious that national and state public health agencies were not in position to apply public health measures in a practical manner. To explain, it has been said that public health is the sum total of the health of individuals. The education which produces it is, therefore, something which cannot be supplied to the populace in carload or truckload lots from national or state capitals. It must be dispensed to individuals in ounces, drams and drops, and its dispensing to those who need it must be insured. This must be done by the local agency who can know how, when and where individuals can be reached and who can inspire the local community to want and to support facilities necessary to its general health preservation. It cannot be done in strict accord with any set pattern, for each community has its own characteristics and customs which no transcendentalism or government fiat may affect. It must come from local, voluntary reaction.

Our states are made up of various units of local government. Our democratic form of government presumes that these shall be granted every privilege of local self-control, and it is only when they fail to exercise it properly or when they infringe upon the rights of other units that the state is justified in intervening. This is as true in the preservation of public health as in the preservation of law and order. More so, for since communicable infections have no respect for political boundaries, and since no unit may tolerate the prevalence of contagion within its jurisdiction without endangering the health and lives of citizens of adjoining units, it is more than a privilege of local control; it is the duty which the state must insist be performed. It has insisted by enacting legislation granting to the various units police powers for the protection of the public health and making it mandatory that they exercise these powers.

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*Presidential address delivered before the American Public Health Association at the seventy-third Annual Meeting in New York October 3, 1944.

This mandate however often fails to envision the whole of the modern public health movement and for the most part, applies only to the control of communicable diseases or of insanitation. While few local units wilfully evade it, there are far too many which have failed, either through apathy or lack of means, to provide proper facilities for carrying out their obligations, secure in the belief that they may in emergency rely upon state agencies.

Lack of means is the greater deterrent of the two and is often more imaginary than real, for while we public health workers may clearly realize justification for public health expenditures it is not easy for many taxpayers to do so. We are irked by their lethargy and impatient with their delay in acceptance of our promises of the benefits of efficient health services, forgetful of the old adage concerning persons "convicted against their will" and that it is only through their spontaneous conviction and coöperation that the services we propose will be utilized.

Sometimes such communities are convinced by emergency, sometimes by demonstration. The basis of the demonstration method, originated by voluntary organizations and by several of the foundations interested in stimulating public health procedures, is that of a financial incentive or grant-in-aid for a temporary period. By reason of many successful demonstrations it has become a federal philosophy which promises complete permanency. A grant-in-aid for public health purposes in those communities burdened by activites of national import, the cost of which should be distributed over the whole nation, appears most justifiable. Likewise it appears a necessity in those communities with actual lack of means. Perhaps we can agree that it serves a useful purpose in broadening the scope of activities of all public health departments until these activities become accepted as a local responsibility or until local means of support becomes available. We may also agree that its use can result in a general uplift of public health standards, even though it may be debatable as to whether all communities require or demand the same quality or quantity of such services.

It is very easy for those of us who have had to contend against the old time penuriousness in public health expenditures to become overly enthusiastic about grants-in-aid. But already state health officers are rumoring that formerly self-reliant communities are substituting these grants for tax funds previously levied for support of many local health activities in order to divert such tax funds to other purposes; that other communities threaten to discontinue proved, needed activities if grants-in-aid are not forthcoming; that still others are demanding these grants, not as a need, but as a right.

There is evidence that in some communities these grants are encouraging public health patterns much too large for the cloth and in excess of the community needs and resources. There is also the attendant danger that because of their source, local taxpayers feel no concern as to the manner in which they are expended, a fact which may lead to extravagances and waste, discrediting the wisdom of all public health expenditures and the business prudence of health officials. We as friends of public health progress must insure that a grant-in-aid shall be used only as a gentle stimulant and not as a narcotic which soothes its victims to complacency and contentment while its effects last, and sends him into collapse when it is withdrawn.

That, thus far in the dispensing of these grants, there has been no grave evidence of usurpation or obnoxious autocratic direction of local health activities, has been due to the integrity and sincerity of federal and state officials who administer them. It must be remembered however that present policies may fluctuate and in this fluctuation there is inherent danger. The power to give implies the power to take away. If we in local communities permit ourselves to become so wholly reliant upon these grants that withdrawal of them means catastrophe to our cause, it means that we may yield to centralized bureaucratic control. While this may be for our betterment, it is repugnant to our democratic ideas and ideals.

Much depends therefore on the degree to which we permit our communities to become dependent upon these grants. They do not depend upon them for support of their public schools or fire and police departments. Is protection of the public health a less responsibility? Our public health education can be regarded as failure if it cannot teach our people the value of community supported and controlled local health activities which meet their wishes and supply their needs. Neither individuals nor communities can continue to accept unwarranted contributions without sacrifice of character. We too, must anticipate the possibilities of ultimate readjustment and reconversion.

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Spastic Ureteritis (Ureteral Stricture)

HENRY W. E. WALTHER, M.D., F.A.C.S.

New Orleans, Louisiana

I FEEL a special justification in discussing the condition which I prefer to term spastic ureteritis because I was once numbered among the unbelievers, the proportion of whom, incidentally, has seemed to become smaller and smaller as the years have passed since Hunner, in 1916, first advanced his concept of the disease. On more scientific grounds, I feel justified in again bringing the condition to your attention because the number of women—now well over a thousand—whom I have been able to relieve by treatment of it has continued to increase steadily.

I might say that I do not share Hunner's all-inclusive idea that spastic ureteritis may originate from acute or chronic infections anywhere in the body. I do not thoroughly agree with him, however, that no patient with vague abdominal pain should be classified as neurasthenic until this condition has been ruled out. I might add that it is much easier to make a diagnosis of neurasthenia than it is to make a diagnosis of spastic ureteritis, which often requires painstaking investigation. The syndrome is often not clearcut, and the fact that so many patients—two-thirds in some series—have been submitted to previous operative procedures often seems to make the diagnosis of neurasthenia obvious. Actually, such a story should at once put the physician on his guard, for the diagnosis of spastic ureteritis is made, first of all, by bearing the possibility in mind.

The syndrome has two chief features, abdominal and urinary. The abdominal pain may be located in any part of the abdomen, especially the gall bladder, kidney and lumbar regions, and it is frequently bilateral. It may be referred to the bladder, rectum, vagina or perineum, and it may radiate to the hip and down the thigh. It is seldom localized in the ureter in the early stages of the disease, though later, as the result of urinary stenosis above the point of contraction, the patient may complain of backache or may have violent attacks of urinary colic. These variations are probably the result of the intricate nerve supply from the kidney and ureter to the chief ganglia of the abdomen and pelvis. Pain is often associated with gastro-intestinal disturbances, chiefly anorexia, nausea, vomiting, eructations and diarrhea, sometimes in the form of a chronic mucous colitis.

Urinary disturbances include frequency, pain on urination, which is sometimes excruciating, and incontinence on coughing. Urinary stasis causes retention of toxins, and the consequent toxemia, results, in advanced cases, in anemia, muscular weakness, easy fatigue, and mental depression. Another result of urinary stasis is the formation of calculi at the point of contraction, with subsequent attacks of colic. In extreme cases, when pyelitis, pyelonephrosis and pyelonephritis have developed. marked abnormalities are found in the urine, but in 80 per cent of all cases the urine is either normal or the changes are insignificant.

Physical findings are usually slight, though in advanced cases there is often severe pain on pressure per vaginam over the ureter. I have personally observed that the pain is often aggravated when the patient is recumbent, a phenomenon not seen in any other disease except in an occasional case of impacted ureteral calculi.

Catheterization of the ureter is often diagnostic. It must be performed very gently, and the choice of the catheter is important. If pain is relieved by the slight dilatation thus accomplished, the diagnosis is certain. I have personally found of great value bilateral retrograde ureteropyelography if a filling defect is apparent, and if the dilating catheter meets resistance at this point, the diagnosis is established.

In extreme and neglected cases of spastic ureteritis, surgery may be necessary, varying from plastic procedures on the ureter to nephrectomy. In the usual case, however, dilatation of the ureter is sufficient, though it must often be repeated. Dilatation to No. 10 F. is usually sufficient. Although dilatation of the ureter is a relatively simple procedure, it is best done under pentothal sodium intravenous anesthesia. For the post-cystoscopic care, various antispasmodic agents were tested, but the best results were not striking until about three years ago, when deproteinated pancreatic extract (depropantex) in a highly refined preparation became available and solved the problem.

The action of depropantex is not clear. It cannot be due to the presence of extraneous substances, since they are not presnet in the refined preparation used. It has been variously attributed to its vasodilating effect, to its inhibitory effect on the sympathetic nervous system, or to its effect on the independent nerve supply of the ureter. Whatever the mechanism may be, there is no doubt, as the hydrophotographic studies of Carroll and Zingale have shown, that it has a direct effect on the tissue of the ureteral wall. Its sole effect is the relaxation of spasm. I am still unprepared to state, as do some authors, that its use expedites the passage of calculi, but, it is the best antispasmodic we have.

My present routine is to give an intramuscular injection of 3 cc. of depropanex just before the introduction of the cystoscope. Following the hypo, injections are given over a period of 12 to 18 hours, at two- to three-hour intervals, for four to six doses, according to the indications. If necessary, the injection may be continued in 2 cc. doses at 48-hour intervals at the end of this period. The great majority of patients respond favorably to this method, and are fit for dismissal from the hospital within 24 hours, and sometimes within 12 hours.

One thing more about spastic ureteritis. It can not be relieved by one dilatation. Patients are asked to report for ureteral dilatation once every three months during the first year. Then three times during the second year, and twice a year thereafter for several years until all symptoms disappear. I have no patients more grateful than those who have been dilated for spastic ureteritis.

I heard the bells on Christmas Day
Their old, familiar carols play,
And wild and sweet
The words repeat
Of peace on earth, good-will to men!
—Longfellow

Postpartum Care*

EDWARD W. NELSON, Capt., M.C., A.U.S.

Jackson, Mississippi

I. Introduction

DEFINITION: By postpartum care we mean the medical observation and supervision of the parturient mother. The natural implication of this definition would embrace the necessary medical attention until the postpartum state no longer exists, i. e., when another pregnancy ensues. This is, of course, an impractical interpretation of the term, and certainly no physician would consider himself responsible for the care of a parturient patient until she had again become pregnant. There is, however, a definite practical implication to the term which would require medical attention until the physiologic changes associated with pregnancy have reverted to normal and the pathologic effects of pregnancy have been corrected, if correctable.

We may bluntly state that the physician must be interested in 1) assurance of complete recovery from the immediate episode, 2) assurance of maximum benefits of available means directed towards longevity, and 3) preparation for future pregnancies.

The question has often been advanced whether pregnancy constitutes a disease. Victor Bonney cleverly characterizes pregnancy as a physiologic phenomenon in the life of a nation, but not in the life of a woman[1]. Therefore, we might say that antepartum and postpartum care are directed towards making pregnancy and parturition as nearly "a normal event in the life of a woman as it is to the life of a nation."

II. Early Postpartum Care

GENERAL: With the delivery of the placenta, postpartum care begins and attention shifts from the "passenger" to the passages, and the maternal organism as a whole. The physician is confronted with a patient who is emerging from an experience which has left great alterations in her anatomy and physiology, and which very often has sapped her vitality. Now is the problem of assisting nature in the restoration of these organs to a normal state and the prevention of complications before permanent pathologic changes begin.

UTERUS-CERVIX: Certainly the most conspicuous, and probably the most important change during pregnancy concerns the uterus, which becomes greatly enlarged, many times more vascular, and which in the puerperium is devoid of its protective inner coat. The site of previous placental attachment is represented by a raw open wound in an environment low in oxygen tension—ideal conditions for the growth of anerobic organisms. It is, therefore, the aim of the physician to assist nature in the restoration of the normal size and tone of the uterus, with the object in mind that when this reduction in size has been accomplished, the uterus shall occupy a normal position. In modern times it has become almost axiomatic that when one desires to reduce the size of the postpartum uterus some oxytocic drug must be administered. Needless to say, this reflects sound reasoning, as all of the oxytocic drugs will cause contraction of a responsive uterus. So often, however, very important factors influencing involution of the postpartum uterus are completely overlooked or disregarded, sole reliance being placed on the enthusiastic administration of one of the oxytocic drugs.

Probably the most important single factor which prevents proper contraction of the postpartum uterus is distention of the urinary bladder—yet, how often is this organ completely neglected while ergotrate is being routinely administered! Obviously, the uterus cannot contract while being pushed into the upper abdomen by the pressure of a distended bladder. If ergotrate administration is to be "routine," then frequent emptying of the bladder should be even more "routine." Patients who have had pre- and postpartal sedation (and especially when an anesthetic is used) will not keep their bladders empty if this routine is not established.

Another significant consideration is the factor of edema of the uterine wall. We have all seen the weak, ineffective contractions frequent in patients with clinical edema, and I am sure we have all seen the subinvoluted boggy uteri which complicate the puerperium in these cases. There is no question but that prepartal dehydration therapy—reduction of water and salt intake and administration of magnesium sulphate—reverses this equation. Some of the most active uteri will be observed occurring in the toxemic patient who had received energetic therapy with mobilization of tissue fluids prior to delivery.

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*Read before the Section on Hygiene and Public Health at the meeting of the Mississippi State Medical Association, May 9, 1944.

It is almost unnecessary to mention that the exhausted uterus will not involute properly. This exhaustion is essentially a problem in proper management of labor, but the end results eventually become a postpartal problem. Suffice it to say that following prolonged labor, the uterus requires more diligent attention. Almost in the same category would fall those cases wherein there is excessive distention of the uterus, such as in twin pregnancy, polyhydramnios, etc. Here, the overdistention is usually a gradual process but the puerperium still is likely to be characterized by excessive bleeding and subinvolution of the uterus.

With regard to the use of oxytocic drugs, most doctors have individual preferences, but general principles should be borne in mind. First, a small percentage of patients are markedly sensitive to the posterior pituitary extracts, and one should ever be on guard to recognize this cause of collapse when obstetrical pituitrin is employed. Secondly, the ergot preparations behave like most other drugs in that the rapidity and effectiveness of response are governed by the mode of administration. Undoubtedly, the most satisfactory response to ergotrate administration occurs when the drug is given intravenously. Less effective is the intramuscular administration, and undependable is the oral route. Several years ago we studied a series of three hundred cases in Charity Hospital in New Orleans, wherein half of the patients received no drug in the puerperium save the single intravenous dose of ergotrate immediately after delivery; the remaining half of the cases were given ergotrate tablets orally for four or five days in the puerperium. These patients were carefully checked from day to day and observation made as to the measured height of the fundus, amount and color of lochia, temperature, etc. The conclusion drawn from this study was that oral administration of ergotrate had no effect on the factors studied.

Cervix: Immediately following delivery, and especially following complicated delivery, the cervix should be examined for lacerations and should any significant laceration be found, prompt repair should be accomplished. The technique of examination is simple—one needs only to grasp the cervix with one pair of sponge forceps, then apply another pair a short distance from the original pair, thus bringing into view the intervening portion of cervix. By successive reapplications of the forceps in clockwise fashion, the whole cervix may be brought into direct view. By repairing lacerations of the cervix immediately after delivery, later operations will be obviated, and the incidence of carcinoma of the cervix, which frequently develops in cervical lacerations, should be reduced.

Lower Genital Tract: Likewise, any lacerations of the lower genital tract should be anatomically repaired immediately following delivery and any bleeding vessels ligated. By careful attention to the puerperium during the first few postpartum days, hematoma formation will be discovered early and proper corrective measures may be instituted. Episiotomies, when properly performed, generally require no special care, other than to be kept clean.

Lochia: It is not without the bounds of decency to observe daily the color, character, odor, and amount of the lochial discharge. Excessive sanguinous lochia usually denotes subinvolution and/or retention of placental fragments, and malodorous lochia usually denotes both, with infection superimposed.

In the past, doctors have too often employed the term "sapremia" to the postpartum condition more correctly termed "metritis." Sapremia is defined as[2] "an intoxication due to the presence in the blood of products of saphrophytic and non-pathogenic bacteria." It would certainly appear more practical to assume that a patient, febrile in the puerperium, with foul lochia is suffering from infection with pathogenic organisms, and, on this basis, investigate the condition further and institute proper therapy.

The management of the lochia is simple but important. Following delivery, unless the patient is in shock, Fowler's position should be maintained in order to facilitate drainage of the lochia. If early ambulation is permitted, naturally a perineal pad must be worn, but for the bed-patient the absorbent material is best allowed to lie beneath the buttocks and between the legs, rather than against the perineum.

Breasts: Proper support for the breasts should be provided as soon as engorgement begins. As long as the patient is in bed, a form of adhesive strapping provides ideal support, but a well-fitting nursing brassière should replace the adhesive strapping as soon as the patient becomes ambulatory. A sterile cotton pledget should be kept over the nipples throughout the nursing period, and the nipples should be kept lubricated to prevent drying with fissure formation. Painful fissures are best managed by prohibiting nursing from the involved breast, meanwhile keeping the breast empty by means of a breast pump. A mild solution of silver nitrate or camphor may be applied to the lesion, but the most important measure is avoidance of further irritation. Painful engorgement is corrected by proper support, pumping the breasts, and restriction of fluids. When caking occurs, the condition will usually respond well to stilbestrol therapy. Should there be any indication of actual infection, sulfonamide therapy should be instituded immediately and nursing discontinued.

Nutrition: The diet in the puerperium should be rich in protein, vitamins, and minerals. The blood count should be checked and iron administered when indicated. Weight reduction should not be attempted during the first four weeks of the postpartum period.

Rest: The matter of bed rest is somewhat of a moot question. There is an increasing trend in obstetrical practice to encourage early ambulation following delivery. The crowded conditions of hospitals and shortage of nursing and lay help is doing much to necessitate this trend. At present, one can conservatively say that early ambulation of postpartum cases can be safely practiced, but whether this is the most satisfactory method of handling cases routinely is yet to be answered.

As to the various types of recommended exercises, such as the knee-chest, bear-walk, etc., it is felt that they are of very little or no benefit. Exercise of the abdominal muscles by trunk bending exercises from the horizontal position is to be encouraged. When the patient becomes ambulatory, an elastic girdle should be worn to help prevent or overcome diastasis recti.

III. Office care and Correction of Childbirth Injuries

The Office Examination: The first office examination should be conducted no later than three to four weeks following delivery. Too often there is no definite appointment made, and the patient, absorbed with her countless new chores, neglects the matter completely. It is well to remember there need be no special indication for this examination. It is to be automatic in all cases, and the patients themselves should be educated to expect it.

First, the patient should be interrogated regarding general health, diet, and any symptoms referable to the various systems. The weight, pulse, and blood pressure should be recorded. This latter is important as many patients will have had previous hypertension which must be followed; and, secondly, some few patients who maintained normal blood pressure throughout pregnancy will manifest hypertension during the postpartum period. A general physical examination should be done, including examination of the heart and lungs and search for edema. Laboratory studies would include blood count and urinalysis.

Special examination would include examination of the breasts for any pathologic condition, and examination of the type of support worn. The perineum should be carefully examined, painful episiotomy scar looked for, and retained sutures removed. If any vaginitis is noted, smears should be made. The vaginal discharge should be noted and questions asked regarding it. Bi-manual examination should be done and relaxation of the perineal floor and bladder searched for. The size, position, consistency, and mobility of the uterus should be determined, and the adnexa carefully palpated. There should be a speculum examination of the cervix, and traction should be placed on the cervix for the determination of prolapse.

Office Treatment: Vaginitis and Cervicitis. The common causes of cervicitis and vaginitis apply during this period. While specific infections due to gonorrhea, trichomonas, and monilia will be seen, the large proportion of cases will fall into the non-specific group. Therapy of these conditions is no different in the postpartum state from that given at other times.

Cervical Erosion. Mild erosion of the cervix will respond readily to chemical cauterization, but the more extensive erosions will require destruction with the actual cautery. Ordinarily, it will be quite safe to cauterize these lesions four to six weeks after delivery, if there is no infection present, and the uterus is in good position. However, if infection is present together with the erosion, cauterization of the cervix should not be attempted until the acute inflammation has been quieted by chemotherapy and douches, over a period of ten days to two weeks. Cauterization should be performed in a radial or spokewheel fashion, care being taken not to invade the cervical canal for any appreciable distance, because of the danger of subsequent stricture formation. After cauterization, the patient should be instructed to take douches twice daily and report in three weeks for re-examination. At this time, a sound should be passed through the cervical canal to assure its patency. Subsequent re-examinations will be performed as indicated in individual cases. No patient should be discharged from care, however, until it has been ascertained that not only has the erosion been corrected, but that there is no likelihood of stricture formation.

Conization of the cervix with the electro-surgical unit is not indicated for the treatment of simple erosion. When cystic cervicitis and/or small lacerations exist, conization may be indicated, but is best not performed in the office, because the cervix should be thoroughly dilated before this procedure is attempted. Needless to say, the danger of stricture formation is greater following conization, and patients must be observed over a longer period of time.

Retrodisplacements. The management of retrodisplacement of the uterus actually should begin as soon as the uterus has entered the bony pelvis. At this time, the ligamentous supports are still relaxed, and, by fixing the uterus in normal position by means of a pessary, these ligaments will be allowed to involute in such a manner as to maintain the uterus in the anteflexed position, without prolapse. This procedure is particularly advisable for those patients who evinced retroversion prior to or early in pregnancy. A sterilized pessary of the Smith-Hodge type may be inserted seven to ten days after delivery, and changed at the time of the first office visit two or three weeks later. It will be found that manual replacement and early insertion of a pessary will correct even congenital retroversions. The pessary should be worn for a period of about three months with cleansing and reinsertion at three-week intervals. At the end of this time, the patient should be allowed to go without the pessary for a one-week period, then re-examined for recurrence of the malposition. If the retrodisplacement is correctible by the pessary method, results certainly should be obtained within three months. If not, the plan should be abandoned.

For those cases in whom retroversion is not detected until the first office visit, there is still hope of correcting the condition by means of a pessary, if care is taken to replace the uterus manually before inserting the pessary, assuring that the proper size pessary is employed, and checking the position of the uterus after the pessary has been inserted. The majority of cases of retroversion may be corrected in this manner, and an even greater number when correction is started as soon as the uterus has entered the pelvis.

Only when all correctible conditions have been corrected, should the patient be discharged from medical care. If no pathologic conditions are found at the time of the initial office visit the patient should be re-examined three months later, and if again all is going well, the patient may be discharged from care. For those patients who present conditions which require treatment at the time of the initial office visit, the length of time care necessary is not fixed, but is determined by the nature of the conditions found, and the response to therapy. All patients should be explained the indications for having not only a general physical examination, but a pelvic examination as well at least once a year.

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New Techniques in the Treatment of Syphilis*

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We are in the middle of a revolution in the treatment of syphilis. As in any revolution, there exists quite a bit of confusion, so much so, that the private practitioner finds it hard to follow the course of events and to put his feet on firm ground. This revolution is still in progress and it will be for several years before the repercussions die down into a clear understandable pattern. In the meantime, it is important to watch the chain of events, and to learn the reasons behind these changes.

This revolution in the treatment of syphilis arose as a realistic move to recognize that one not only has to give good treatment, but that that good treatment has to be practicable to give. We came to a plateau in our progress. We had a good treatment for syphilis. The Clinical Coöperative Group's so-called 40-40 treatment (40 arsenic and 40 bismuth) had attained widespread use and recognition. It had a 90% cure rate in early syphilis, 5% toxic reaction rate and a 1/3000 mortality. It was the best treatment we had, but far too few would complete it. Studies by practitioners, by clinical groups and health department clinics, showed that from 30% to 50% of patients failed to take all their treatment, were quitting before completion of the 18 months' treatment required. Even the best clinics, with all of their social and follow-up workers, were losing at least 10% of the cases.

You and I know, there is no halfway cure for syphilis. You either take all the treatment, or you expose yourself to infectious relapse or further progression of the disease. We all have learned that mere change of the positive blood test to negative doesn't mean cure. We have learned to treat the disease, not the blood test, and to know that we must carry on for 18 hard, tedious months to safeguard the patient against further tragedy.

So, here was a paradox. We had a good treatment, the best known to date, but not enough patients would complete it, take all the treatment they must take to insure against relapse. Eighteen months was too long. From 10 to 40 out of every hundred patients were dropping out before protected; and at least 10% of those who were dropping out were relapsing and going on to a syphilitic death. In the face of this, the 40-40 treatment's mortality was not 1/3000; in reality it was 1/100 instead. The best treatment we had was being frustrated by economical, social and practical factors. The treatment was good, but far too few would complete it.

Syphilitic therapists soon began to realize they must face those realistic economic, social and practical factors that cut the efficiency of the Clinical Coöperative Group's 40-40 18 months' treatment. Somehow, the treatment had to be shortened. That long, arduous, 18 months had to be cut down to a more reasonable length of time. A new treatment régime was needed which must be shorter, cheaper, but as safe and as effective as the standard 18 months' cure.

In the last decade group after group sought the answer. New régimes were tried but almost always with the same result—the faster the arsenic was given, the more toxic reactions resulted, and the higher the mortality rose. Prime example of this was the Mt. Sinai Group's continuous intravenous drip, five-day cure: In attempting to give 1500 mgm. of arsenic in five days, the toxic reaction rate rose from 5% to 31%. The mortality increased from 1/3000 to 1/200. Obviously, no doctor could afford such risks—such treatment would have to be made safer to use in everyday practice.

Eagle and Hogan of Johns Hopkins watched these trials closely, and by careful review of the literature, in 1938 uncovered an important fact—that every attempt to shorten syphilitic arsenotherapy, whose total dosage exceeded 1200 mgm., was at least therapeutically efficient, despite the amount of time involved or reactions experienced. By careful review, they had stumbled upon a pharmacologic and therapeutic principle—that the cure of syphilis depends on the total amount of arsenic administered, practically regardless of the amount of time taken to give the drug. They checked this, using experimental chancre syphilis in rabbits, and proved it on the basis of their findings. They knew that they could organize a therapeutically successful 1-week, 4-week, 8-week, 12-week or 20-week treatment régime. All would be just as effective therapeutically—the only difference being that the toxic reaction and mortality rates would increase, the shorter they made their régime. The problem reduced itself to setting up a régime of reasonable mortality, and then finding some way to combat the increased toxic reaction rate.

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Arbitrarily, Eagle and Hogan set up a régime. Taking 1500 mgm. of arsenic as the total dose, they set up a 10-week treatment course. That meant 150 mgm. of arsenic a week. This, they divided so that the patient received three 50 mgm. doses of mapharsen a week. Fifty mgm. doses, we all know, are well tolerated, and studies have shown that, given every other day, you can avoid any cumulative toxic effect, that the toxic effect of one shot is over before the next is given. Toxicologists figured, on the basis of minimum lethal doses and safety factor determinations, that the mortality of this 10-week treatment would be 1/1000, a reasonable mortality in face of the 1/100 of the 40-40 treatment. Five years have passed. We have been pleasantly surprised. Over 5,000 patients have been treated, with only two mortalities. The therapeutic level has held up well. However, as we expected, there has been an increased rate of toxic reaction. Sixteen per cent showed some toxic reaction, 10% gastro-intestinal reaction, 2% an erythema, 1% a stomatitis, 1.6% a headache and the rest consisted of fever, pruritis, jaundice and rarely a purpura. Not one exfoliative case has appeared. Most of these toxic reactions are uncomfortable, but an answer has been found to the problem. Their increased incidence demands more attention and care than you give a clinic or an office patient, therefore it is wiser to hospitalize every patient, in order that the patient can be subject to continual observation and early treatment of toxic manifestations. The patient can be put to bed, given good nursing care, analgesics to prevent pain, fluids to control hydration and vomiting, glucose to protect the liver, and in cases of serious difficulty, bal, the new anti-arsenical drug, may be used.

Thus, the rapid treatment of syphilis has become a hospital procedure, and over 35 special V-D hospitals have been put into operation, and 20 more are being built in the country to carry this procedure on. You'll be happy to know that Mississippi has three such hospitals, and that so far, over 600 females have been treated without mortality. By proper hospital and medical care, every complication or toxic reaction has been effectively cared for, and the patient made comfortable. In fact, the mortality experience and success in handling the toxic reactions has been so good, that we now can cut Eagle and Hogan's arbitrary régime in half, and we can safely treat syphilis in five weeks. And all this advantage has been gained without loss of therapeutic efficiency. For this we can thank our new less toxic arsenicals, our new protective drugs and procedures, and the development of a hospital system that provides continual observation and early arrest of any complication, even before it gets started.

But this isn't all. We have scarcely begun to settle down from this rapid treatment revolution, when lo, an even greater revolution looms on the horizon. Penicillin. Most of you have read with interest the early reports of Dr. Mahoney. By giving six daily doses of 10,000 Oxford units for ten days, he has gained complete clinical and serological regression in 85% of his cases, and every one of the 15% failures responded to a second course of treatment. Naturally, it is too early to count the number of relapses, but certainly, we have a new vital weapon. Even if 50% of those patients should relapse, it would be well worth giving a patient a 50% chance to be cured in ten days. So far, there have been no serious complications with penicillin except for a fever (in reality a Herxheimer reaction) on the fourth day in some cases. This is readily controlled with fluids and morphine.

Much research remains to be done—especially in relation to later effects of these new treatments, but certainly we now have a practical tool. We have short-term treatments of reasonable mortality, with good therapeutic efficiency, and no doubt will soon be economically reasonable. We are indeed in the midst of a revolution, but we needed it. When you search the case histories of the blind, the deaf, the paralyzed, and the insane we pay for, those victims of late syphilis show that once, long ago, they maybe took a few shots for bad blood, but much to their own sorrow, and much to the cost of the taxpayer, they didn't carry through until the end of their treatment. The cost, the time, the trouble were too much to take the long 18 months' cure. Today, there is new hope—a short, practical treatment that can wipe the shadow from the land and lift the weight of tragedy. If every case can receive 100% of that desperately needed treatment, and if every doctor will take the effort to find the cases infected by each case, then we can lick syphilis and keep it licked. God grant that day may come, and soon.

DISCUSSION

DR. FELIX J. UNDERWOOD (Jackson)—A lot of painstaking effort has gone into the venereal disease control program since it was actively launched about eight years ago. Methods have been improved extensively although there is still quite some distance to go. Intensive therapy has proved effective in most cases of early syphilis; however, the more intensive schedules are not entirely without risk to the patient. Moreover, no satisfactory intensive method has been developed for the treatment of late cases, so it would seem that extensive therapy has its limitations.

Happily, the new chemotherapeutic agent penicillin promises to provide a solution to some of our worst problems in the treatment of the venereal diseases. We are hearing amazing things about the performance of this drug, but progress must necessarily be slow to safeguard fully the patient's welfare. It is stated that Mahoney has suceeded in effecting definite cures in 72 of 75 cases of chemoresistant gonorrhea, by using penicillin; 34 of these cases having received prior treatment with fever therapy in addition to sulfonamide drugs. In addition, he has succeeded in producing apparent cures in many cases of dark-field positive primary syphilis by the employment of penicillin in a dosage of 25,000 units given at 4-hour intervals over a period of 8 consecutive days. The schedule involves 48 intramuscular injections for a total dose of 1,200,000 units.

No one can foretell the possible implications of these current experiments, but they are of tremendous importance, to be sure. If penicillin fulfills its early promises, we are without doubt on the threshold of a revolution in the treatment of syphilis and gonorrhea. In view of its comparative freedom of toxicity, its simplicity of administration, and the brief period required to secure its full effect, it bids fair to supersede many of our at least reasonably effective therapeutics. Progress in the field of chemotherapy in the past few years has been great indeed, and it is exciting to contemplate its ultimate effect in reducing morbidity and mortality.

DR. W. H. FRIZELL (Brookhaven)—I would like to ask a question of the essayist. Recently I had a case of a woman whose husband in another state had infected her with syphilis. She had some of the primary symptoms, a blood Wassermann was positive. She took about ten doses of neoarsphenamine and cleared up beautifully. All at once when she had taken her tenth dose she took a very extensive dermatitis, which became worse. Of course that stopped the arsenical treatment. I then set about to counteract the arsenic and she cleared up. Now this woman is sensitive to arsenic. She was negative for several months, but she finally came back with it. I can not use arsenic with her, and I am giving her the standard treatment with some amelioration of the symptoms. What to do next?

Will you explain also what your bal is, and how used, and how long to wait to be sure of a cure? My idea of the cure of syphilis is you may get a negative Wassermann, but still never be cured of syphilis. We have seen negative Wassermanns year after year, and they finally develop the same old cardiac symptoms that syphilis in early life not treated will produce. Then how long should we wait on penicillin? Perhaps we should go slow on saying that it has cured syphilis. It may render it negative for a while and still not cure it.

DR. HOLLISTER—I believe you have three questions. First, continue with bismuth for six months, then shift to another arsenical, put it on a patch test, and see if the patient is still sensitive to the arsenic preparation. Of course you should start in with low doses, and if the patient is sensitive to arsenic in general, you are doomed to a four- or five-course treatment of bismuth.

What are the ingredients of bal? That is a substitute name that covers the real name which can not be revealed. It is a war chemical which was developed in the treatment of leukocyte poison. It is a secret preparation and I do not know what it is. We have it on call and it can be ordered from Johns Hopkins.

Your third question is, How are we going to prove cure? We are using a new instrument to prove it and that is a quantitative blood test as contrasting with a full quality test, which is either positive or negative. Just because a test is termed negative does not prove cure. You may have to go on and treat the disease and not the blood test. The same thing can apply to the long treatment that many of you are giving in your offices. It might stay negative throughout the entire group and at the end of 18 months produce a positive test. You may have a patient who needs more treatment than others. I suggest if you still have a positive test at the end of a long term, or six months in rapid treatment, you owe your patient this technique—this quantitative test at three-month intervals.

Dr. F. M. Smith (Vicksburg)— I had hoped to get in two thoughts I have in mind so that Dr. Hollister could set me clear and probably some others who have been thinking along this line. While we are marking time waiting for what penicillin will give us, and while we are waiting the building of efficient hospitals for hospitalization of these patients, the general practitioner and the clinics we have throughout the state must proceed for a while yet in the old treatment which is still the safest, but I would like for the essayist to express an opinion on this. It seems to me that if we do not give this treatment continuously, if we give it any rest period at all, we make it more difficult to accomplish what we call a cure. I also think we find a higher percentage of neuro-syphilis cases coming from these who have been treated and given rest periods than we do from cases who have not been treated at all.

Dr. Hollister—I am very young in the field, but definitely I think that county health units and private practitioners as well should use the best 40-40 treatment and make an effort to see that everybody follows on through. The disease is treated and not the blood. We will face certain complications in giving that treatment right, mainly the patient's coöperation on hospitalization and agreement to come back for treatment until the blood proves pure. If we give rapid treatment and turn the patient out to wander around town, we are taking a certain risk, so the hospital system is still the place for rapid treatment. Until we know the story of penicillin more thoroughly, we should wait and use our standard known tests.

As to the other question, there is a divided opinion. If we do not treat the patient continuously we are likely to have more positive Wassermanns. The most important thing we have to fight is the economical factor that makes the patient stop treatment. We have to hang on all the way through or we will continue to fill up Whitfield and our institutions for the blind and the deaf with these people.

No one in any community is more impressed by the tragedy of tuberculosis than the practicing physician. No one is more aware of its preventability.

Physicians generally agree that tuberculosis control among the public cannot depend solely on an individual calling his private physician when he suspects that he has tuberculosis. The onset of the disease is too insidious and the mental attitude of the average patient too resistant. By the time the usual patient sees his physician he is already in the moderately or far advanced stage and has probably been spreading the disease for months. Physicians commonly agree that some mass approach to the problem of finding the asymptomatic case is essential.

The Goiter in Private Practice*

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N PREPARING this paper, it is the intention of the essayist to combine a rather searching review of the literature with the experience garnered from a rather large practice.

Goiter in northwest Mississippi seems to be endemic. About five per cent of the male patients coming to the office present some sign of enlargement or of malfunctioning of the thyroid gland, while the percentage is about four times as high in female patients. On this basis it seems apropos that a discussion of goiter from our point of view be made.

Neither race nor economic status seems in any extent to influence the presence of goiter.

Goiter may be classified as 1) diffuse colloid goiter, 2) diffuse toxic goiter (exophthalmic goiter), 3) non-toxic adenoma, and 4) toxic adenoma. To these may be added the rarer forms of thyroid malfunctions, as Woody thyroiditis (struma), perithyroiditis, acute thyroiditis, 23 neoplasms of the thyroid, and goiter due to drugs.

Goiter is an overgrowth of the normal parenchyma of the thyroid, and is due to aberrant tissue, shortage of iodine in the diet, excess of goitrogenous material in the diet, and as the result of injury or infection.

Most of the goiters seen in our practice are the diffuse colloid goiters, occurring mostly at puberty and during pregnancy. Other states of stress may produce goiter. Will there be an increase as the result of the stress of the war and its concomitant hardships?

The literature is filled with diagnostic and therapeutic papers on hyperthyroidism, mild, moderate and severe. I found nothing outside a textbook on the hypofunctional states.

Cretinism is a state of total absence of thyroid gland secretion, thyroxine. If diagnosed early one might offer these unfortunate individuals a brighter outlook. Successful treatment depends upon early diagnosis, and adequate controlled therapy continued throughout life.

Myxedema is a state of greatly depleted thyroid function. It may be idiopathic or postoperative. Its management depends upon recognizing the clinical entity. Laziness, thickened skin, constipation, mental dullness, and excessive gain in weight in spite of a small dietary, poor tolerance of cold, low blood pressure, slow pulse rate, plus low metabolism rate and high blood cholesterol will confirm the impression. To control the myxedematous patient one must afford a diet liberal in iodine and give adequate doses of thyroid.

There are cases of mild hypothroidism. The patient is nervous, does not do so well in school, does not get along well in life. This very inability to do as well as companions is disrupting. It leads to psychic changes. It is entirely controlled with adequate dosage of thyroid, iodine, a bit of psychotherapy, and a balanced diet. Foci of infection should be cleared up such as infected tonsils and teeth. Encouragement should be liberal. The load should never be quite too heavy. These constitute by far the greater number of thyroid cases that present themselves to the physician. Here therapy is a balance of psychotherapy, thyroid, dietetics and iodine.

The diffuse colloid goiter [24, 29] may be purely physiologic, along with puberty, exaggerated at menstrual periods, or with pregnancy. The fullness in the neck with or without pressure symptoms, and the soft smooth enlargement of the thyroid are diagnostic. Evaluation of these cases is necessary, for probably this is the beginning of all forms of goiter. A carefully taken history, repeated BMR determinations, in series of three or more on successive days, may contribute information as to the nature of the goiter and its inclination as to toxicity. Frequent careful palpation will reveal the presence or absence of adenomatous development and serve as a guide to proper management. Observation, small doses of iodides and judicious use of thyroid will suffice in most cases. Small doses of iodides may be preventive.

The non-toxic adenoma is expressed as unequal growth, soft and the usual clinical symptoms are absent. Cosmetic effect and pressure symptoms are largely the cause of the patient seeing the doctor relative to the thyroid. Induration, excessive pain, symptoms of toxicity, eye symptoms being absent, indicate the direction of therapy. Delay in removing in children may be fatal, as 44% of the adenomas in children are malignant[16].

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The smooth toxic thyroid, thyrotoxicosis, is the most dramatic, and has the most serious clinical importance. The diagnosis is not difficult if one keeps in mind the points delineated below. Confusion is apt to be in diabetes mellitus, psychoneuroses, minimal active tuberculosis. Hypertension is a possible cause of difficulty in differentiation. The same is true with poikilocythemia vera, the leukemias, and periarteritis nodosa.

In thyrotoxicosis ninety-five per cent of the thyroid glands are noticeably enlarged. The increased body warmth, increased pulse rate, ease of fatigue, the fine tremor, the facies of happiness to see the doctor, the long pulse pressure with snapping of the pulse as the blood pressure cuff is loosened to approximated diastole, the evidence of cardiac over-activity, palpation, capillary pulsations, exaggerated apex beat, the loss or failure to gain weight with an increase in appetite and ingestion of foods, are all characteristic signs. The eye signs are noted by stare, lidlag, loss of wrinkling of the brow, widening of palpebral fissures, and loss of convergence, along with the lowered blood cholesterol. Elevated BMR determinations are conclusive evidence that thyrotoxicosis is present. The young and middle-aged are thus affected. The senile develop the apathetic state so well described by Lahey. It must be exhausting to be old and thyrotoxic! Adequate diet, rest and B-complex liberally will control some, attenuate some, and have no effect on others. When surgery is indicated, and it so often is, then iodization postoperatively is usually indicated. Radiation is useful in a certain per cent. [1, 2, 3, 4, 10, 12, 15, 20, 26]

The toxic adenoma presents all the above symptoms, plus the nodular goiter, harder than the non-toxic adenoma, and without the eye signs. Management is the same though, surgery more often technically difficult because of the adenomatous nature[6]. Iodine must be used judiciously or not at all in these cases. There is little justification for the use of thiourea and thiouracil[22] in any other than the thyrotoxic patient without adenoma. On drugs the information is so meager that I would hesitate to use it now.

Malignancies[4] of the thyroid, while rare, occur. They are probably all carcinoma, and grade and respond to surgery, and radiation according to Broder's classification index. In children adenomas should be removed early for they become malignant rapidly[6,27,28].

CASE REPORTS

1. P. S. White female, age 33, came to my office in 1938. She presented her case as an enlargement in the throat with pressure symptoms. Further questioning revealed that she had finished high school in the upper quadrant of her class, but had been unable to compete in society with her classmates. She was obese, constipated, almost lethargic, ate little, gained weight, and secreted an abnormal volume of urine. Hemoglobin was 60%.

Physical examination revealed an obese (176) lbs. white female with thick cracked skin, blood pressure 116/74, pulse rate 64, temperature 97.8° F, the thyroid smooth, enlarged with no nodules. There was a faint trace of albumin in her urine. Chronic nephritis or nephrosis often masks these cases as a diagnosis. BMR was minus 36. Repeated, it was minus 32.

She was put on a liberal diet, increased Vitamin A and C for the skin, and told to take ten drops of syrup of ferrous iodine after each meal, to use iodized salt in her food, and to report back in a month. At this time she seemed a bit brighter, the shin a bit more pliant, and the blood pressure and pulse were 114/70 and 68, respectively. Since then she has been checked monthly on the same diet and the ferrous iodide only sporadically, with 1 gr. dessicated thyroid before breakfast and lunch. Her skin is fairly normal, her constipation is gone, her weight 150, the pulse 80, the blood pressure 132/76, and her BMR averaging around minus 16. She is able to hold her job, to enjoy life, and has married and is happy. She stopped the thyroid for two months once and slipped back down the scale to the state of lethargy. Menses are normal now. Before medication she bled excessively with some clots. The thyroid is about half its original size and smooth.

Myxedema such as this must be idiopathic. She had no operative scar. There have been three cases of postoperative myxedema under our care for the past four years.

2. M. S. White female, age 31. This woman came to me because of failure of vision,

muscle pain, twitches, and tingling. This had come on about five months after having subtotal thyroidectomy. We, on the basis of the tetany, diagnosed on Chvostek's, Trousseau's, and Erb's signs. Control was effected with a high calcium, low phosphorous diet. She is able to live normally and is gradually leaving out some of the calcium she had to take formerly. I have not seen one yet who would need AT10, (dihydrotachysterol), or parathormone. [17, 18, 19.]

3. M. L. H. White male, age 54. This man has been under my care for the past five years. During this time he has had an essential hypertension. Attempt to control him with elixir potassium thiocyanate orally. He took all the components of hypertensive therapy, was thoroughly coöperative, reporting at monthly or six-week intervals for a determination of his heart action, blood pressure, pulse rate, and EKG. For about six months we were unable to effect any change in him. He was sent to an internist for further investigation and we decided to step up his thiocyanate. In about eight weeks he returned with a sore throat and a sense of compression in his neck. Blood thiocyanate was found to be 17 mgms. per 100 cc. This indicated definite thiocyanate toxicity. The thyroid was enlarged smoothly and firmly. The periorbital tissues were definitely edematous. The general appearance was not good. BMR was minus 10, blood pressure 190/124, and basal pulse rate 74. EKG was essentially normal. His urinalysis was normal. Stopping of the thiocynate cleared the goiter in two weeks.

The findings listed above were within the range of those found before thiocyanate therapy was instituted. This entity has been reported clinically and produced experimentally.

4. Mrs. F. L. B. White female, age 28. This woman was referred at the sixth month of pregnancy because of hypertension and tachycardia. She gave a history of having been nervous and easily exhausted since her last pregnancy two years previously. Clinically, she was a well developed and well nourished white female. The blood pressure was 186/74. The pulse rate, at rest for three hours 116. The eye signs, tremors, and increased bodily warmth were present. The EMR was plus 66. It was repeated on two occasions and found to be from plus 58 to plus 66 each time. The thyroid was palpably and visably enlarged and smooth and firm. A diagnosis of thyrotoxicosis was made, and she was put on iodides, and a high caloric, high carbohydrate diet with large doses of B complex to aid the CHO metabolism. Stormily, but never in true crisis, we carried her through a normal delivery. At six weeks postpartum we checked her BMR, plus 70. She was then hospitalized, Lugol's instituted and when her pulse reached base, 110, blood pressure 168/72, we stole her goiter, and she has since been well. Eight weeks postoperative, BMR plus 20, blood pressure 138/76, pulse rate 78 per minute. She has lost some of the stare, most of the tremors, and all the cardiac signs of thyrotoxicosis. Incidentally she lost 14 pounds during pregnancy, delivered a 7½-lb. baby and now weighs what she weighed three years ago, 132 lbs.

In this operation we used Crile's anociassociation, giving two yellow capsules of soda each morning at 7 A.M., at 7:30 2 cc. thiamin intramuscularly. When base was reached the yellow capsules were allowed to hold their original contents, and the 2 cc. thiamin had incorporated within is the usual preoperative doses of opiate and atropine. For anesthetic we used sodium pentothal intravenously to produce sleep and 3/4% procaine intradermally along the line of incision. Pulse rate never during the operation exceeded 136.

Another very similar case has been handled by us. In this case we took the advice of a telephonic consultation with a reputable internist, and the experience garnered in the above case, and did the subtotal thyroidectomy as soon as diagnosis was definitely established and the patient was iodized. Her course, while just as toxic at the time of diagnosis, was much easier on her and on the surgeon. The pregnancy was carried on to term, delivered uneventfully at home by her referring physician.

It will be interesting to know

1. What effect the thyrotoxicosis will have on these two babies as they mature.
2. What chance of postoperatove myxedema these women have as related to the non-pregnant thyrotoxic patient. [5, 8, 24, 30.]

SUMMARY

1. Thyroid disease is not uncommon in Mississippi. It is present in about five pre cent of the male populace and about twenty per cent of the female population.

The incidence might be reduced by the increase of the iodine content in our diet.

2. Myxedema and hypothyroid states are just as common, though far less dramatic, than the thyrotoxic states. Their proper management will rehabilitate just as many folks as the proper management of the thyrotoxic states.
3. Another case of thiocyanate goiter is reported.
4. Two cases of thyrotoxicosis complicated by pregnancy are reported.

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DISCUSSION

DR. J. C. CULLEY (Oxford)—Any discussion of Dr. Googe's excellent paper would be more or less a repetition. He has brought out a few points in this paper, especially that case which he termed thyrotoxicosis, I have a similar case. This patient had been ill several months before he came to me, and he had the same symptoms described by Dr. Googe. I withdrew all drugs immediately and reduced the swelling in the neck and endeavored to reduce his hypertension. Many times we will find these patients are sensitive to iodine; it is wise not to give too much of the solution. Use it as a preoperative drug rather than a treatment drug.

Let the surgeon be goiter conscious, but do not let the patient. There are many things that produce tremor in the hands of a woman. Nervousness can be produced by too many other entities than thyroid. Make a careful investigation of the patient before cutting deep around the neck. Many patients come in and say "I want my goiter removed in the morning." I usually send them home or let them stay in the hospital for a week and find out something else is the matter with those patients before I operate on them. You know goiter has been streamlined since I went to school at Vanderbilt. I shall never forget trying to memorize the seventeen lines of goiter, and it is now streamlined down to four. X-ray has a fine effect sometimes.

Virus Pneumonia*

R. S. SAVAGE, M.D.

Brookhaven, Mississippi

At the mention of the word pneumonia, we automatically think of the clinical picture as described by Hippocrates, "acute fever, cough, pain, sputum, and a tendency to recover in a week." Today, this is still a typical clinical picture of lobar pneumonia as in the the days of our father of medicine. Approximately eighty-five per cent of our pneumonias are of this typical type. The other fifteen per cent are composed of streptococcus pneumonia, Friedlander's streptococcus pneumonia and our latest addition to the family, a distinct disease entity, a filterable virus pneumonia which has assumed many names, as catarrhal fever, acute bronchitis with associated atelectasis, acute diffuse bronchitis, and that disease which the War Department through its surgeon general has designated primary atypical bronchopneumonia, etiology unknown. It is well to avoid the term virus pneumonia until further research is done to see if a causative agent can be found.

It is this latter disease which I am going to discuss using as a basis for my discussion my limiited series of cases which I have seen in the past eighteen months. Most literature on this subject has come as a result of study in army camps throughout the world. Not only in America but in England, and Africa, and there was some mention made of the condition in the German army even before Pearl Harbor. Atypical pneumonia is seen, according to literature, most often in young adults. Of my cases, one was a child of eight years, one was in a person of fifty-two, the rest being in the age group of seventeen to twenty-two. All of my cases except one were women, probably due to the fact that all the young men are in armed services. It is not unlikely that atypical pneumonia has existed for many years and has been described as grippe or perhaps by the loose term of "flu pneumonia." Today, however, we consider atypical pneumonia a distinct disease entity, and, as the name implies, it is atypical in many ways. The disease itself is typical only in that it is atypical.

Etiology is unknown but is probably caused by a filterable virus. Incubation period is unknown. Most investigators estimate the incubation period from five to twenty days. The disease is most common in late fall and early winter, however, I had two cases in July 1943. Campbell in *War Medicine* describes the disease as existing the year around in Panama and Hawaii. There is much discussion as to the contagiousness of the disease. I have not seen two cases in any one family, but there have been epidemics of it at Camp Claiborne, Louisiana, and at Camp Eustis, Virginia. Thus, it must be at least mildly contagious.

Clinically, onset is usually gradual. Influenza-like in character, there is fever, muscular aching, malaise and a non-productive cough. This cough is usually the first symptom, later it becomes productive with mucoid sputum. This cough later becomes paroxysmal. Pleural pain so common in true pneumonia is absent but substernal soreness due to severe coughing is a common and distressing symptom.

Physical examination reveals a patient moderately ill but not desperately ill, the entire respiratory tract inflamed from above downward, with interstitial pneumonia being the main feature. There have been as many different descriptions of chest signs as have been investigators. In my cases, I found a slight lag and suppressed breath sounds. As to rales, I have not been able consistently to hear them and only on rare occasions have I heard any rales at all, and they were of a fine crackling variety heard at the end of respiration. In all my cases there has been a marked congestion of the throat. Temperatures range in these cases from 101° to 104° and last from four to twelve days. Even when the patient is seen with temperature 104° he does not appear very sick. Blood counts in my cases have been from normal to slightly elevated averaging around 9000 with an increase of lymphocytes.

As has been determined from signs and symptoms, the disease could be mistaken for many other diseases. It was so easily mistaken for malaria in a Panama army camp that a routine chest x-ray was required on every suspected case of malaria unless the plasmodia was found and then in those cases which did not respond to acute malaria treatment. The only positive way we have of making diagnosis is by x-ray and as the patient is usually not very sick, the economic factor enters into the picture and diagnosis is usually never made. Thus, I think we see many cases which we do not recognize. X-ray of chest shows according to Bowen's description which is classical, "Disease extends outward from hilus well into the parenchyma occasionally reaching the periphery. The appearance is that of a confluent mottled or rounded area, usually of hemogeneous moderate density in the central portion, with the borders fading into the normal lung. It is similar in roentgen appearance to the exudate inflammation around the lung abscess, to the perifocal reaction in nodose tuberculosis." Thus we see by x-ray that there is a marked involvement of lung tissue out of proportion to clinical symptoms. In a large series of cases studied at Camp Claiborne, Louisiana, John H. Dingle showed that the right lung was involved in sixty-two per cent of patients, left lung in thirty-three per cent and both lungs in only five per cent. This proportion is very similar to the proportions as shown by pneumococci pneumonia. One of the theories for the slow convalescence is that the amount of lung tissue involved and the slow resolution tends to make slow convalescence. It has been shown that patients will have definite sick lung by x-ray even after having been temperature free for a period of several days or two weeks.

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*Read before the Section on Medicine at the annual meeting of the Mississippi State Medical Association, Jackson, Miss., May 1944.

The treatment of patient resolves itself into the old pharmacop standard. Keep the patient comfortable and treat symptoms as they arise. Opiates are usually necessary to control the distressing cough and to eliminate substernal pain. In the past few years one or the other of the sulfa drugs has been used for every ache and pain of man and most times with gratifying results, but in atypical pneumonia, I have found that the patient is not improved by any of the sulfa drugs. Dameshek claims that sulfonamide compounds given to certain patients with virus pneumonia may bring about a hemolytic crisis, thus the drugs are actually contra-indicated. In my series of cases I have had excellent success in the use of large doses of ammonium chloride.

Summarizing, atypical primary pneumonia is a rather recently recognized disease entity with a low mortality rate but a high morbidity rate, with very indefinite symptoms but mostly associated with a severe cough, mucoid sputum, sore throat, and malaise. The disease closely simulates malaria and thus we men in Mississippi where malaria is supposed to be prevalent, should watch for atypical primary virus pneumonia by using chest film more often. We will find more atypical pneumonia than we would suspect.

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ACHIEVING MORE WITH LESS

War teaches a dear lesson but we are learning valuable ones from it in medicine. Never before have our soldiers been so well cared for on the battlefield and in the hospitals. The sulfa drugs, penicillin, and blood plasma have played a big part. Prompt treatment has also been of very great value. The importance of giving due consideration to the individual soldier has been demonstrated in this war also, treating the soldier as well as his wound or his disease. Another very impressive observation is the very effective and splendid type of surgery that is being done by the surgeons with limited trained assistance. Surgeons have learned as never before that time counts in an operation and has a very definite relation to the death rate in serious cases. This all sums up to the fact that brass door knobs and tile floors, three doctor assistants, a bevy of operating room nurses, and then three trained nurses a day, are not always essential for successful surgery. The essentials in good medicine is what needs to be applied, even at home out at the cross-roads and down by the old millstand. Medical schools need to teach the student how to do better work with less equipment and expense. Just a few men in the big centers can not solve many medical problems. The application of the effective means must be common knowledge to the whole profession. Teaching and consultation in the centers and by the specialist are imperative, but the essentials, the plain technique and methods must be common knowledge to the rank and file of the profession. You can not win a big war with officers only.

In establishing a four-year medical school our legislators should think straight and be convinced of these facts. The plan should be to carry effective medicine to every nook and corner of this state and to make available for treatment and teaching purposes all the clinical material within the bounds of our two million population.

§

The Northeast Mississippi Thirteen Counties Medical Society held its last quarterly session of the year at Baldwyn on December 12. The meeting was held at the high school auditorium and Dr. R. B. Caldwell was the host and arranged the program. It was one of the best meetings of the year. Dr. H. A. Stokes presided as president. Drs. John Dyer, of Houston, Thomas Wolford of Columbus, Henry Boswell of the Sanatorium, and Jack Guyton, Associate Professor of the Eye, Johns Hopkins University, were the essayists. Governor Tom Bailey was the chief speaker at the banquet. Drs. J. P. Culpepper and E. W. Green of Hattiesburg, B. S. Guyton of Oxford, and S. B. Caruthers of Grenada were among the distinguished and appreciated guests. Dr. W. A. Evans of Aberdeen was present to the delight of everyone. Members of the Woman's Auxiliary were present evidencing the keen interest and the splendid work our doctors' wives are doing in the interest of better medical service. Dr. W. J. Aycock of Calhoun City was elected president for next year with Dr. W. H. Cleveland of Tupelo as secretary.

Dr. R. B. Caldwell presided at the banquet. Governor Bailey's fine address was both informative and appealing, reviewing many interesting facts about our state's history, its resources and its opportunities. He paid a fine tribute to the medical profession and pointed to the broad field of serivce that challenges it in the building of health assets, mental and moral as well as physical. He made it plain that he favors a four-year medical school for the state and insisted that we are able to afford it. He declared that he is anxious to see our fine young men with the right kind of hearts have an opportunity to study medicine and serve the people of our state. "All together for a bigger and better state," was his challenging appeal.

§

We wish every reader, every advertiser, and every subscriber the very best possible under the circumstances. We are deeply grateful to one and all for your confidence, for your patience and for your help in every way. The journal for the last few months has been published under the most trying circumstances. Except for the urge of duty and the feeling that this journal has a mission and is rendering a service more needed than ever in our state and nation we could not carry on. This journal is deeply interested in seeing that every person in our state and land have adequate medical service, and at the same time that medicine must be kept free and democratic. Mississippi has outstanding leaders in medical democracy.

We express our gratitude to the profession of the state and to our many friends throughout the nation. We are grateful to the doctors who carry professional cards, supporting and inspiring us with their faith. We appreciate our advertisers and ask that our readers give them due consideration in buying supplies for the office and hospital.

May we all open our hearts to the spirit of peace during this Christmas Season, thus to achieve a world brotherhood as an insurance against war in the future and to invigorate us and make us strong to meet every challenge of our great profession.

It is good to know that Dr. Seale Harris of Birmingham, Ala., has finished a biography of Dr. Frederick Grant Banting of Toronto. Here we have a great man of medicine and a great humanitarian writing the life and the work of another great scientist and a lover of mankind. On account of the shortage of labor it will be a little while before the book will be off the press. This book will be both informative and inspiring. It should be one of the most widely read books that has heen published in the medical field for many years.

§

The passing of Dr. William P. Webster of Oxford took from the ranks of our profession another good family physician who had been practicing for fifty years. The finest type of patriotism known to man is being demonstrated by the doctors who are past threescore and ten and who are keeping right on doing their very best when they are needed so badly in the state. Glory and honor to every one of them.

W. H. A.

It has been the philosophy and practice of my life to keep my face turned forward and to think of the future rather than of the past. Consequently I have been drawn to and have associated intimately with the younger members of my profession. However, last spring, I joined with a group of aging doctors who constituted themselves into the Half Century Club. To have been practicing medicine fifty years or longer is a prerequisite to membership in the club. The organization was not perfected but a nucleus was formed and the purposes of the organization were outlined and discussed and it was agreed that at the 1945 meeting of the state association the organization would be completed. On a close study of the membership of the Mississippi State Medical Association it was disclosed that fifty or more of these men are eligible for membership in this club. Many of these are still very active in the affairs of the Association as well as in the practice of medicine, while some have felt inclined to relinquish their interest in progressive medicine as well as their personal contacts with other doctors.

In my thinking it is most unfortunate that any doctor should permit himself to feel and assume that his work is done and that his interest in medicine should terminate because fifty years have come and gone since beginning his work. It is unfortunate for the publice because he should still be capable of rendering good service. It is most unfortunate to such an individual himself, because such a course will certainly rob him of his best chance for personal happiness. The joy and pride that comes to a man who feels and knows that he is still in the fight and that he has friends who appreciate and love him, can not be evaluated. In this I speak, not from observation alone, but from an experience that I would not exchange for all the wealth that might be offered me. I hope and trust that every doctor in Mississippi who has completed fifty years in the practice may read these lines, ponder the thoughts suggested, and determine to meet in Jackson next May, in order that he may enlist in this very worth-while undertaking. Think about it—talk about it and arouse yourself from any tendency to fall into this lethargic condition that is fatal to all too many doctors at this time of life and usefulness. We shall expect you to join us. Do not disappoint us.

§

Now a few words about the recent meeting of the Northeast Mississippi Thirteen Counties Society in Baldwyn. It was a success in all respects. The attendance was fair, very good considering the fact that a war is on. The program was excellent and the interest intense. Our guest essayist was Dr. Jack Guyton, who is the worthy son of a most worthy father, Dr. Billy Guyton of the University. This young man reflects credit on our state. We deeply regret, however, that he has, even for a time, deserted our state. Just such experiences emphasize the truth spoken by Governor Bailey at the banquet table that evening. He said it is imperative that a four-year school of medicine be established in Mississippi if we are to expect to educate our sons in medicine and hold them in the state. Neither can we expect to draw capable young doctors from other states so long as they get their education and training in other states. Dr. Henry Boswell was on the program also. He always has something good to say and always says it well. Dr. Caldwell was host to the meeting. His hospitality was regal and was most highly appreciated by those in attendance.

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At this Christmas Season, as at all other times, my best wishes go out to the readers of the *Mississippi Doctor* and my love in unmeasured and immeasurable quantity goes out to all my friends—a merry Christmas and a happy New Year to all.

G. S. B.

News and Comment

EXPRESSION OF APPRECIATION

To those who made possible the September issue of the *Mississippi Doctor* as contributors and especially to Doctor and Mrs. W. H. Anderson I should like to express my sincere appreciation. Of all the things which have come to me during the past twenty-five years none has given me greater pleasure or was more deeply appreciated. It has done me a considerable amount of good to know that those with whom I have been associated for the past twenty-five years have appreciated the program which has been carried out in this state for the protection of the health of our citizens.

Whatever doubts or misgivings may have been present at the time of my entrance into this work more than twenty years ago, have now been dispelled by the demonstration of wholehearted coöperation on the part of those who have written so nobly — all of whom have contributed spiritually and materially to achievements in the public health field all of the preceding years.

Mississippi is fortunate in having a sound public health structure — one which will weather any peril. The lives of many men have been devoted to making this one of the soundest public health organizations in the nation at this time. To all my friends who have written regarding the September issue, and to those who throughout the years by their constant words of encouragement have lent inspiration, I wish to extend my heartfelt thanks. To each and every citizen of the state, I pledge a continuation of wholehearted public health endeavor.

Felix J. Underwood

EAST MISSISSIPPI SOCIETY

Dr. E. L. Richardson, Louisville, was elected president for 1945 of the East Mississippi Medical Society. Dr. R. L. Simmons, Meridian, was reëlected secretary-treasurer.

Twenty-five physicians attended the annual meeting at Meridian at which Dr. J. Leonard Dixon of the Department of Surgery, Tulane University, New Orleans, presented a paper on "Abdominal Injuries."

TRI-COUNTY SOCIETY

At the meeting of the Tri-County Medical of Brookhaven was elected president, and vice-of Brookhave was elected president, and vice-presidents from the four counties embraced in the group were elected as follows: Dr. C. E. Mullins, Lincoln; Dr. T. F. Donnell, Copiah; Dr. B. S. Waller, Laurence.

ARKANSAS GROUPS ELECT

JONESBORO, Ark.,—Dr. Joe W. Ledbetter of Jonesboro has been named president of the Craighead-Poinsett Medical Society.

Other officers elected are Dr. E. J. Stroud of Jonesboro, vice-president, and Dr. J. H. McCurry of Cash, secretary-treasurer. Dr. L. R. McDaniel of Tyronza and Dr. McCurry of Cash were named delegates and Dr. J. I. Jones of Lepanto and Dr. W. C. Overstreet of Jonesboro, alternates, to the 1945 State Medical Convention.

Dr. Wallace B. English of Cardwell, Mo., and Dr. J. O. Rush of Forrest City were in charge of the program, given at the Jonesboro Country Club.

Dr. Sam Thompson of Camden was elected president of the Ouachita County Medical Society at its annual meeting December 7 at the Camden Hospital.

Other officers elected: Dr. Rowland Robins, vice-president; Dr. R. B. Robins, secretary; Dr. J. B. James, delegate to the State Medical Association, and Dr. B. V. Powell, alternate delegate.

Dr. Joe Shuffield of Little Rock, president of the Arkansas Medical Society, and Dr. Robert Watson, brain surgeon, also of Little Rock, made talks.

OPHTHALMOLOGY AWARD

A prize of $500 for the most valuable original paper adding to existing knowledge about the diagnosis of early glaucoma or the medical treatment of non-congestive glaucoma is being offered by the National Society for the prevention of Blindness, 1790 Broadway, New York 19, New York. This award will take the place of two separate prizes of $250 each which had been announced some time ago.

RESOLUTION

The following resolution was unanimously adopted at a regular meeting of the Clarksdale and Six Counties Medical Society held in Clarksdale, Mississippi, on November 8, 1944:

> *Whereas*, there is under consideration legislation before a committee of Congress for the establishment of a comprehensive postwar hospital and rehabilitation program; and,
>
> *Whereas*, under the proposed plan now being advocated it will be necessary that each state desiring to share in the benefits of such program appoint a committee or commission whose duty it shall be to furnish a complete survey of the needs of the state; and,
>
> *Whereas*, this society is deeply conscious of the urgent need for more adequate hospital facilities within our state; therefore be it
>
> Resolved, that the Clarksdale and Six Counties Medical Society go on record as approving such a program and requesting that Governor Thomas L. Bailey appoint such a committee or commission; and be it further
>
> Resolved, that a copy of this resolution be sent to Governor Thomas L. Bailey, to the president and secretary of the Mississippi State Medical Association and to its component medical societies in Mississippi, and to the members of the Council of the Mississippi State Medical Association.

DR. JAY R. LANNING

Services for Dr. Jay R. Lanning, 77, who died at the McRae Hospital, were held November 27, in Corinth.

Dr. Lanning was born in Manchester, Iowa, and was married to Anna Mae Zeibel at Abilene, Kan., Nov. 23, 1891, who survives. Dr. Lanning attended University of Tennessee Medical School from which he graduated and began practice of his profession. He served as a first lieutenant in the United States Army Medical Reserve Corps during World War I.

He was a Methodist, a Mason, Eastern Star, Elk and a member of the Perry A. Johns Post, American Legion.

Besides his wife he is survived by two sons, V. M. Lanning of Louisville, Ky., and Garnett R. Lanning of Corinth; two daughters, Miss Mary Lanning of Washington and Mrs. Nell McClure of Corinth; a brother, Dr. J. M. Lanning of Pitcher, Okla., and a grandson, "Dick" Lanning of the University of Mississippi.

Interpreting Medical Literature

Staff of Review

Dermatology—James G. Thompson, Jackson.

Ear, Nose and Throat—Edley Jones, Vicksburg.

Obstetrics and Gynecology—J. F. Lucas, Greenwood.

Orthopedics—Thomas H. Blake, Jackson.

Pathology and Clinical Pathology—John C. Henthorne, Vicksburg.

Public Health—Felix J. Underwood, Jackson.

Pediatrics—Harvey F. Garrison, Jackson.

Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

DERMATOLOGY

Archives of *Dermatology and Syphilology,* Volume 50; Number 4; October, 1944, pages 271, 272.

PIGMENTED PAPILLOMA OF SKIN. Robert A. Fox; Arch. Path. 36:195 (August) 1943. Fox reports a small group of cases of pigmented tumor such as that described by Bloch as "benign pigmented epithelioma" and by others as a type of nevus. These brown, round or oval lesions had a polypoid button shape and a warty appearance. The microscopic structure was that of a pigmented, papillary tumor made up of nests of closely packed epithelial cells. In describing this type of tumor, Fox rejects the term "epithelioma" because of the confusion resulting from the "benign" versus "malignant" connotations. The term "intraepidermal epithelial nevus" is rejected by him because he would reserve the word "nevus" for those tumors which contain nevus cells. He urges that dermatologists and pathologists completely discard the word "mole" in order to avoid confusion. The name "pigmented papilloma of the skin" is suggested as one which is compatible with the morphologic and histologic features of the growth. Lynch, St. Paul.

CAUSE AND TREATMENT OF FURUNCULOSIS. Philip B. Price, J.A.M.A. 124: 1189 (April 22) 1944.

Price believes that a local spread of infection is sufficient to account not only for the features of furunculosis but for its characteristic chronicity. It is his opinion that the usual mode of spread of infection in furunculosis is by discharged sweat, bathing and friction, which smear the pathogenic organisms over the surface of the skin. He recommends that an attempt be made to sterilize the skin of the whole contaminated region. Healthy skin can be thoroughly degermed with exactly 70 per cent ethyl alcohol. Price washes the involved area for from twenty to thirty minutes with the alcohol. The optimum time to employ this treatment is in the interval between the healing of the last furuncle and the onset of the next one. Eleven patients with furunculosis so treated had prompt and permanent relief.

* * * * *

THE SOURCE OF THE ALLERGIC ACTIVITY OF HOUSE DUST. Marion T. Davidson, J. Allergy 14:244 (March) 1943.

The author feels that there is little reason to look beyond the self-evident substances which are present in houses and expect to find some unknown substance. "House-dust is composed of cotton, flax, jute, wool, silk, six or more animal hairs, three or more feathers, glue, kapoc, orris root, pyrethrum, and tobacco." In the discussion of the paper, Alan G. Cozart suggests that the antigen in house dust may be a product of the deterioration of cellulose (cotton and kapoc). Hoyer, Cincinnati. (Am. J. Dis. Child.)

PEDIATRICS

ERYTHROBLASTOSIS FETALIS. A PROPOSED DEFINITION AND CLARIFICATION OF THE TERM. Macklin, Madge Thurlow — *American Journal of Diseases of Children,* 67: 445 (June) 1944.

The writer proposes the use of the term erythroblastosis to designate the presence in the circulating blood of the fetus of immature red cells, the type or quantity of which is not normal for that period of pregnancy. The following scheme shows the conditions under which erythroblastosis might be found and shows their interrelations.

ERYTHROBLASTOSIS

With iron in fetal tissues due to
A. Hemolysis
of megaloblasts
of normoblasts
of mature red cells
by
Rh factor other factors
Aplastic Phase

Hemolysis excessive causes death of fetus before blood can regenerate; iron present indicating destruction of blood, but no increase in hemopoiesis

Without iron in fetal tissues due to
B. Factors other than hemolysis operating early with the site of hemopoiesis
Extramedullary and in bone marrow operating late with the site of hemopoiesis in bone marrow.

Idiopathic erythroblastosis due to developmental arrest in hemopoiesis, permitting early embryonic type of formation of blood to persist; no destruction, hence no iron.

It is seen that:

"According to this scheme erythroblastosis might be due a) to hemolysis or b) to factors other than hemolysis. If the condition is due to hemolysis, the antibodies might conceivably act on the megaloblasts, the normoblasts or the mature cells. Hemolysis might be caused by the Rh complex or by other factors as yet undiscovered. Since hemolysis is the essential feature, iron will be present, especially in the fetal liver. This condition might be termed hemolytic disease of the newborn due to the Rh factor or due to an undetermined factor, or, if the term erythroblastosis is still to be used, it should be called erythroblastosis accompanying hemolytic disease of the newborn.

"Erythroblastosis may be caused by factors other than hemolysis, and under these conditions no iron will be demonstrable in the tissues. These factors may operate early or late in development. If they operate early, the stimulus to excess hemopoiesis will continue to exert its effect on the extramedullary centers of hemopoiesis as well as on the bone marrow. If the stimulus arises late in development, after the bone marrow has taken over all the functions of formation of blood, no extramedullary hemopoiesis may be found."

The writer has included at the bottom of the scheme of classification two theoretic states. To the left is placed the term "aplastic phase." "It might be possible that the hemolytic factors overwhelmed the fetus, causing its death before there was opportunity for the regeneration of blood. There would probably be iron in the liver, because there would be destruction of blood, but there would be no increase in hemopoiesis." A fetus with such a condition would not show the blood picture of what has been called "erythroblastosis" in the past nor of what the writer has defined here as "erythroblastosis." "However, the condition would be hemolytic disease of the newborn and should be so designated. It would be comparable to the aleukemic phase of leukemia."

The second theoretic state is designated as "idiopathic erythroblastosis." "This condition would be due to developmental arrest in the blood-forming organs, just as there is developmental arrest in other organs when harelip, cleft palate or umbilical hernia persists until birth. A blood picture which is normal in the early embryo would persist through later stages of development, and the fetus would be extramedullary hemopoiesis and immature red cells in the circulating blood but no hemolysis and no iron in the liver."

"One of the confusing problems of hemolytic disease of the newborn is that antibodies cannot always be demonstrated in the mother's serum either before or at the time of birth of a fetus which obviously shows all the signs of the disease, even to the presence of iron in the liver." A tentative explanation of this problem is advanced, based on a supposed immaturity of the antigen as it exists in the immature red cell, with a corresponding specificity of the antibody depends on its reaction with the antigen as it exists in the mature red cell. Testing of the blood of the mother with that of the fetus may demonstrate the presence of such antibodies. Another possible explanation is based on the recently discovered fact that there are at least six different Rh factors. Preparations of only the two commoner types of antigen are employed in the usual tests."

The study of the cause and treatment of erythroblastosis fetalis: It is quite interesting and many of our very best men are doing research on this subject at this time. I anticipate following up this article with another one in next month's journal.

State Board of Health

Felix J. Underwood, M. D.

THE TUBERCULOSIS PROBLEM

In spite of the remarkable progress of the past decade in eliminating communicable diseases, tuberculosis continues to be a major problem. Many of the serious and disabling diseases have bowed to the efforts of the chemotherapist and the results achieved have given a sense of security and protection against certain of these infections such as the world has never before known. Man's conquest of disease presents a gratifying picture and encourages the hope that diseases which have remained comparatively aloof from present treatment methods will ultimately respond to the efforts being constantly made to bring them under complete control. To eliminate for all time the deaths due to tuberculosis would represent one of the greatest achievements of all times. It may not be achieved in one generation or even two, but each generation of physicians and health workers can contribute toward this goal.

To find tuberculosis in its earliest stages, isolating cases to protect against spread of the infection, and to provide adequate treatment constitute our chief weapons of attack. Education is important too, especially among families of the tuberculous. Coöperation with physicians in the fight against tuberculosis in Mississippi are the Mississippi State Sanatorium, the state and county health departments, the State Tuberculosis Association and its 71 county affiliates together with six hundred or more volunteer workers.

It is good to note Mississippi's steady decline in incidence of tuberculosis over the past twenty years. The Division of Vital Statistics reports that the death rates for 1942 and 1943 are the lowest on record for the state. However good this record may be, we must be concerned not so much with the fact that the morbidity and mortality rates have declined as we are with the fact that so many cases still exist. In Mississippi, there were 1,428 cases reported in 1942 and 1,600 cases in 1943. Doubtless many cases exist of which we have no knowledge. The increased use of x-ray film on a mass scale will bring to light further cases while they are in a curative stage. Following this, the most acute need will be for adequate treatment facilities.

Mississippi has an excellent Sanatorium but its bed capacity is not sufficient to take care of all cases needing attention. At least two hundred additional beds are needed to take care of advanced cases. This would enable many patients to be cared for as rapidly as they need treatment without having to lose precious time on a waiting list. It would also be a means of isolating these individuals to prevent further spread of the infection. There is no question but that the problem is of sufficient economic importance to the state and its numerous communities to justify legislative action at the earliest possible date which would provide the needed facilities. It is pointed out that one of the greatest problems of the tuberculosis control program is that of the Negro. Three or four times as many Negroes are stricken with tuberculosis as are white people. Additional beds at the Sanatorium for their isolation and treatment would prove an important aid in bringing these cases under control and in curbing further infection.

The establishment of a Division of Tuberculosis Control in the United States Public health Service promises to provide much impetus to present programs. It will have as its main objective case-finding, education, personnel training and the provision of local and state facilities for more adequately coping with the problem upon a coöperative federal-state basis. Such a program would go a long way in stamping out tuberculosis and it is hoped that its early development will be realized.

In one phase of tuberculosis control, it has been shown in Mississippi that even lack of funds and sanatorium facilities may be partly offset by careful and full use of existing facilities and close coöperation between physicians and selective service officials with the local and state health departments. Through this coöperation several hundred men rejected for military service because of suspicion of tuberculosis were admitted to the sanatorium for examination and then reclassified as available for military duty on a basis of accurate findings. Whenever a case of active tuberculosis was found, the rejectee was returned to his home and placed on a waiting list of patients to be admitted to the sanatorium. The fullest coöperation between physicians and health departments is the first step in a real control program. Mississippi's consistent gains against tuberculosis might be attributed in large measure to this spirit of coöperation.

There is no question but that the greatest profit to the community, the family, and the individual is derived from early discovery and adequate treatment of the disease, and isolation of the patient. The needs are clear. Unceasing effort will be necessary to overcome obstacles which hamper progress in our tuberculosis control program to the end that the disease may someday be eradicated as a major social, economic, and public health problem.

It is the time of year when the public is made somewhat tuberculosis-conscious by the sale of Christmas Seal stamps. Certainly this annual drive, the proceeds from which provide substantial support to tuberculosis control, will receive the whole-hearted support of every physician and health worker. This year's Christmas Seal sale will be the 38th annual sale. Begun back in 1907, it was among the first campaigns against a specific disease to get underway on a large-scale basis. It no doubt led the way to numerous other advantages in preventive medicine and contributed to the pattern of attack against these diseases. "Our present knowledge is sufficient to assure victory over tuberculosis" — this fact we know. Let us do our part in putting this knowledge to work.

Over the centuries tuberculosis has killed more people than has war. In 1943, tuberculosis killed approximately 56,000 people in the United States. That is the equivalent of four army divisions—four divisions who will not march in this war either on the home front or abroad. This is the toll exacted by our complacency towards an enemy we know how to conquer.

STATE BOARD OF HEALTH MEDICAL LIBRARY

In the State Board of Health Medical Library, the physicians of Mississippi are provided with an excellent opportunity for keeping up with the important medical advantages of this period. In the short period of eight years, when it was first begun, many of the more useful journal files have been completed and bound and basic text-books and manuals have been added to make for a well-rounded collection. The only public medical library in Mississippi, it is located on the first floor of the Old Capitol where there is an attractive reading room and modern steel stacks of the open type where the physician and health worker may feel free to browse. Every effort is made to obtain the reference needs of those engaged in the vital pursuit of protecting health and curing and preventing disease. Out-of-town physicians who have filled out borrower's cards will be served by mail. Most material is lent for two-week periods. There is no question but that the library can be of tremendous help to the busy physician and an important force in promoting health.

Recent acquisitions which may be of interest to physicians are the following:

American Medical Association,*New and Nonofficial Remedies,* 1944, Chicago, American Medical Association, 1944.

Bierman, William, *Physical Medicine in General Practice,* New York, Paul B. Hoeber, 1944.

Black, J. D., *Food Enough,* Lancaster, Jacques Cattell Press, 1943.

Bremer, J. L., and Weatherford, H. L., *A Textbook of Histology,* 6th ed., New York, The Blakiston Company, 1944.

Clinics, *Gastro-Intestinal Disorders,* October, 1944, Philadelphia, J. P. Lippincott Company.

Crutcher, Hester B., *Foster Home for Mental Patients,* New York. The Commonwealth Fund, 1944.

Goldring, William, and Chasis, Herbert, *Hypertension and Hypertensive Disease,* New York, The Commonwealth Fund, 1944.

Groves, Ernest R., *Conserving Marriage and the Family,* New York, The McMillan Co., 1944.

Herms, W. B., and Gray, H. F., *Mosquito Control,* revised edition, New York, The Commonwealth Fund, 1944.

MacDonald, M. G., *Handbook of Nursing in Industry,* Philadelphia, W. B. Saunders Co., 1944.

Medical Clinics of North America, *Specific Methods of Treatment,* October, 1944, Philadelphia, W. B. Saunders Co.

Pelner, Louis, *The Diet Therapy of Disease,* New York, Personal Diet Service, 1944.

Ribble, Margaret A., *The Rights of Infants: Early Psychological Needs and Their Satisfaction,* New York, Columbia University Press, 1943.

Simmons, J. S., et al., *Global Epidemiology,* Philadelphia, J. B. Lippincott Company, 1944.

Snodgrass, R. E., *Insects, Their Ways and Means of Living,* New York, Smithsonian Institution Series, 1938.

Stewart, Isabel Maitland, *Education of Nurses,* New York, The MacMillan Co., 1944.

Stokes, J. H., et al., *Modern Clinical Syphilology,* 3rd edition, Philadelphia, W. B. Saunders Co., 1944.

COMPILING PUBLIC HEALTH STATISTICS AT THE STATE BOARD OF HEALTH

There has been established recently in the Administrative branch of the Mississippi State Board of Health a Public Health Statistical Service. This service is designed primarily to collect and study data relating to the vital events of life—births, deaths, illnesses, marriages, divorces—and the population giving rise to these events as well as the facts which influence these events.

Shown above are the International Business Machine, and the tabulating file through which raw data is compiled and correlated for analysis.

PREVALENCE OF COMMUNICABLE DISEASES IN MISSISSIPPI

	Oct. 1944	Oct. 1943	Oct.-5 yr. avg.
Acute poliomyelitis	8	1	8.2
Bacillary dysentery	715	515	596.2
Dengue	0	0	.8
Diphtheria	123	61	82.2
Influenza	2980	2807	2634.2
Measles	66	166	162.6
Meningococcus meningitis	22	11	8.4
Other forms meningitis	6	0	2.8
Pellagra	210	204	254.8
Pneumonia	721	877	697.0
Pulmonary tuberculosis	156	174	141.0
Scarlet fever	73	57	73.2
Smallpox	0	0	1.0
Tularemia	4	4	2.3
Typhoid fever	16	15	12.8
Typhus fever	16	17	12.8
Undulant fever	4	4	2.4
Whooping cough	516	690	562.8

Woman's Auxiliary

TO THE MISSISSIPPI STATE MEDICAL ASS'N

President	Mrs. L. J. Clark Vicksburg
President-Elect	Mrs. Stanley Hill Corinth
First Vice-President	Mrs. H. C. Ricks Jackson
Second Vice-President	Mrs. Henry Boswell Sanatorium
Third Vice-President	Mrs. W. H. Anderson Booneville
Fourth Vice-President	Mrs. Ben Walker Jackson ..
Recording Secretary	Mrs. Geo. W. Owens Jackson
Treasurer	Mrs. J. D. Simmons Cleveland
Historian	Mrs. Harvey Garrison Jackson

Councilors: First District, Mrs. H. L. Cockerham, Gunnison; Second District, Mrs. B. S. Guyton, Oxford; Third District, Mrs. Thomas M. Gore, Houston; Fourth district, Mrs. J. K. Avent, Grenada; Fifth District, Mrs. A. L. Gray, Jackson; Sixth District, Mrs. R. L. Simmons, Meridian; Seventh District, Mrs. J. P. Culpepper, Hattiesburg; Eighth District, Mrs. A. B. Harvey, Tylertown; Ninth District, Mrs. S. B. McIlwain, Pascagoula.

CENTRAL MEDICAL AUXILIARY

The Central Medical Auxiliary members met Tuesday, December 5, at the Red Cross Room on the Fairgrounds for their regular monthly meeting. Members will be interested to know that 2800 dressings have been made during the last three meetings at the Red Cross Room. After a delicious luncheon, a short business meeting was held, with Mrs. W. R. Bethea, president, presiding.

Those present included: Mrs. Adna Wilde, Mrs. T. B. Holloman of Florence, Mrs. Walton Lipscomb, Mrs. R. C. O'Ferrall, Mrs. J. O. Segura, Mrs. R. B. Price, Mrs. H. C. Ricks, Mrs. George E. Riley, Mrs. George W. Owen, Mrs. T. M. Moore.

NORTHEAST MISSISSIPPI THIRTEEN COUNTIES AUXILIARY

The last quarterly meeting of the Northeast Mississippi Thirteen Counties Auxiliary met with Mrs. R. B. Caldwell in Baldwyn, who opened her home to the group December 12 for a delightful program and tea.

Mrs. J. Rice Williams, president, presided at the business session, at which it was agreed that dues be increased to two dollars for each member in order to include a subscription to the *Bulletin.*

The highlight of the meeting was the message brought the group by the state president, Mrs. L. J. Clark of Vicksburg. Dr. Virginia Howard from the State Board of Health also brought an informative message. Reports of the dircetors' meeting of the national organization were given by Mrs. V. B. Philpot of Tupelo, and Mrs. Stanley Hill of Corinth, the president-elect of the state organization, both of whom attended with Mrs. L. J. Clark in Chicago.

The following officers were elected for the coming year: Mrs. W. K. Orr of Fulton, president; Mrs. T. H. Rayburn of Pontotoc, president- elect; Mrs. J. Rice Williams of Houston, first vice-president; Mrs. W. C. Hays of Sherman, second vice-president; Mrs. B. C. Cantrell of Plantersville, third vice-president; Mrs. Nora Anderson of Tupela, secretary-treasurer; Mrs. H. A. Stokes of Guntown, assistant secretary; Mrs. V. B. Philpot of Tupelo, parliamentarian.

At the tea, which was a beautifully planned affair emphasizing the Christmas motif, Mrs. Stanley Hill poured tea, while the hostess was assisted by Baldwyn friends with the serving. Christmas candles glowed in candelabra, completing a lovely table setting.

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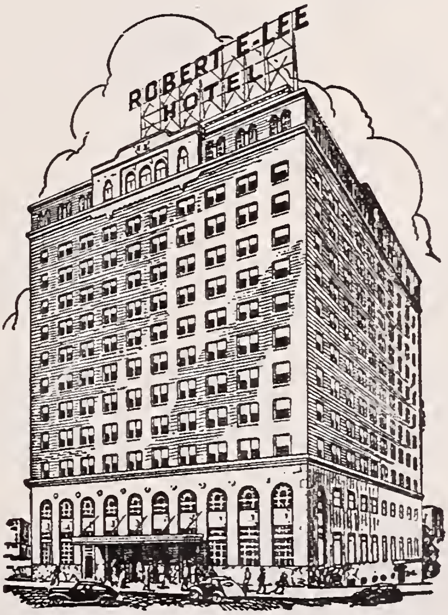

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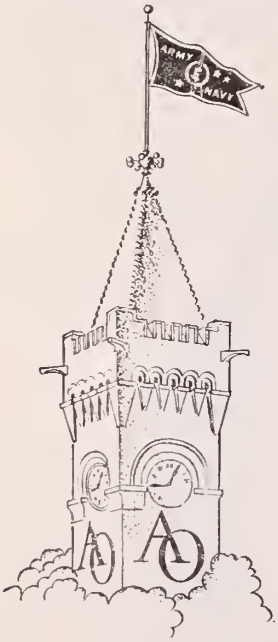

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The Mississippi Doctor

VOL. 22 BOONEVILLE, MISSISSIPPI, JANUARY, 1945 NUMBER 8

* * *

* * * * * *

Let every dawn of morning be to you as the beginning of life, and every setting sun be to you as its close—then let every one of these short lives leave its sure record of some kindly thing done for others—RUSKIN.

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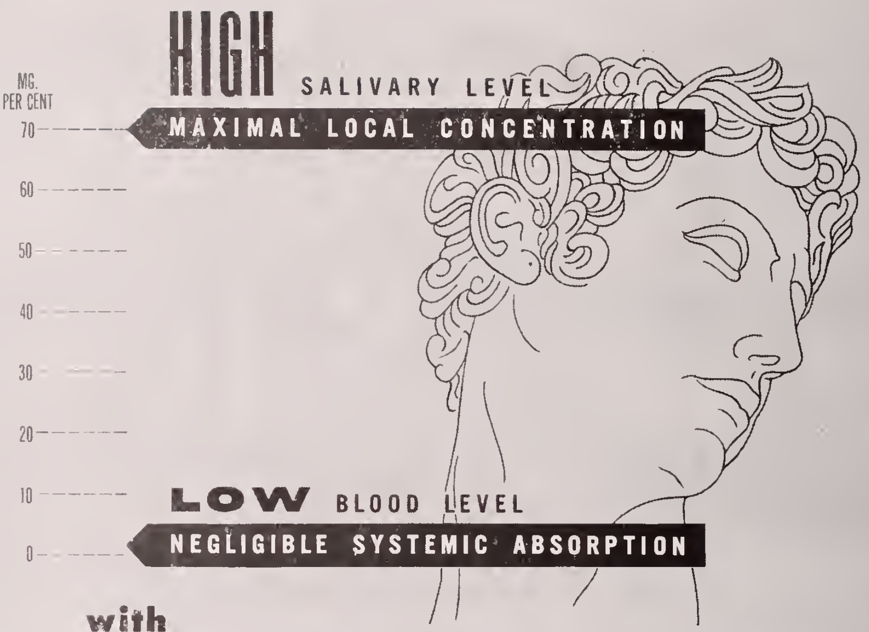

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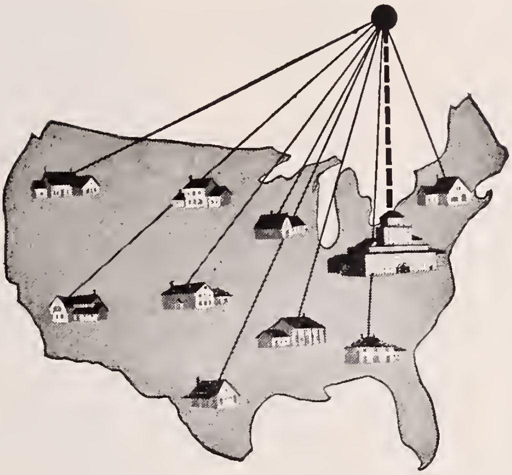

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1. Tracy Putnam: Convulsive Seizures, p. 4, J. B. Lippincott Co., 1943.

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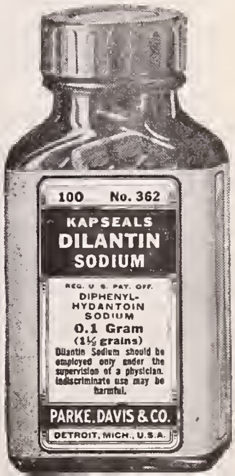
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The Mississippi Doctor

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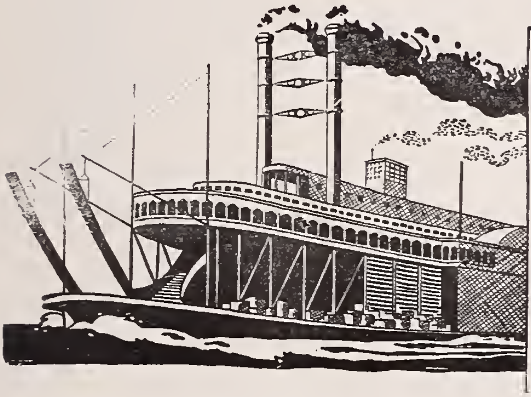

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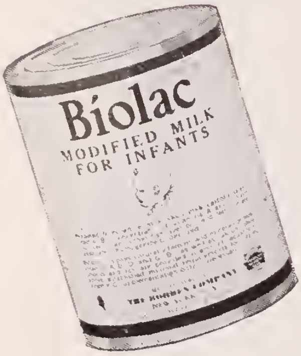

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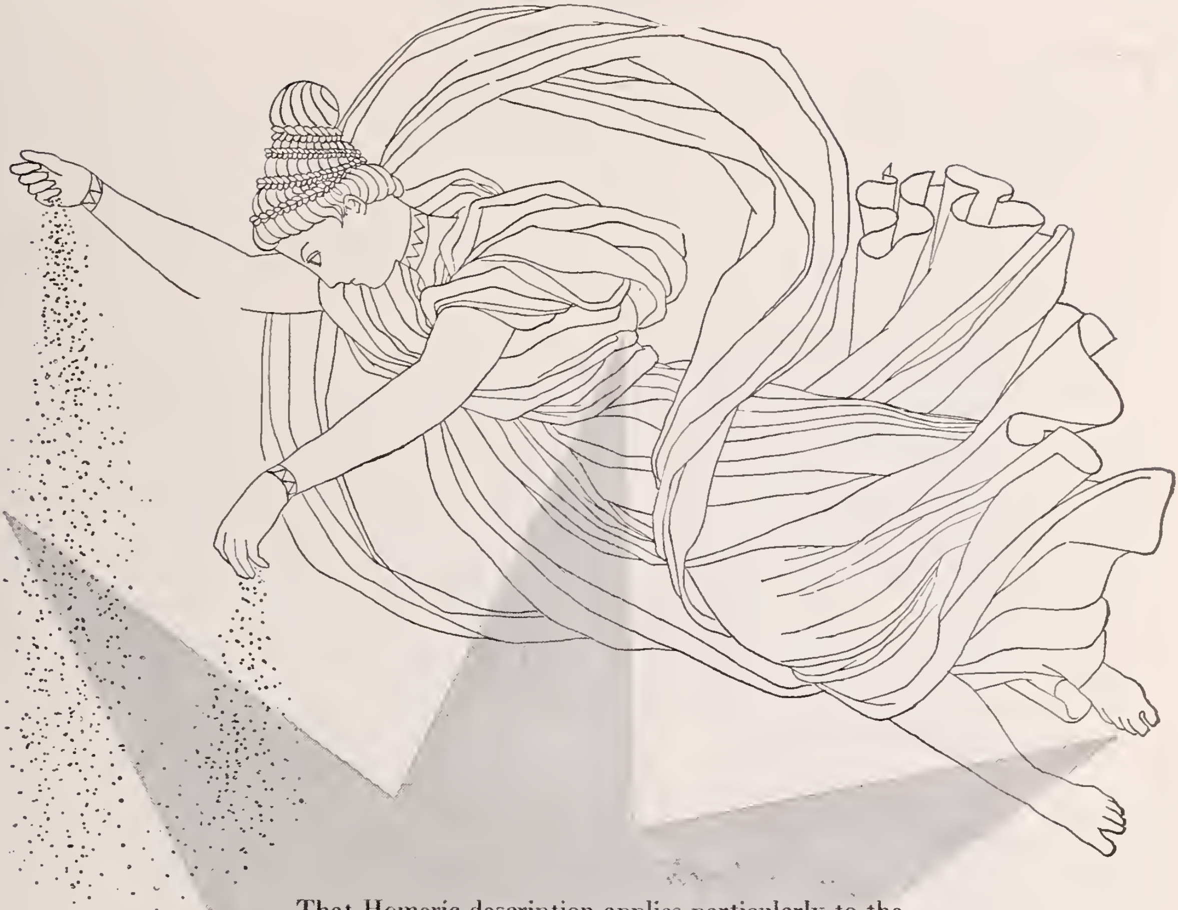

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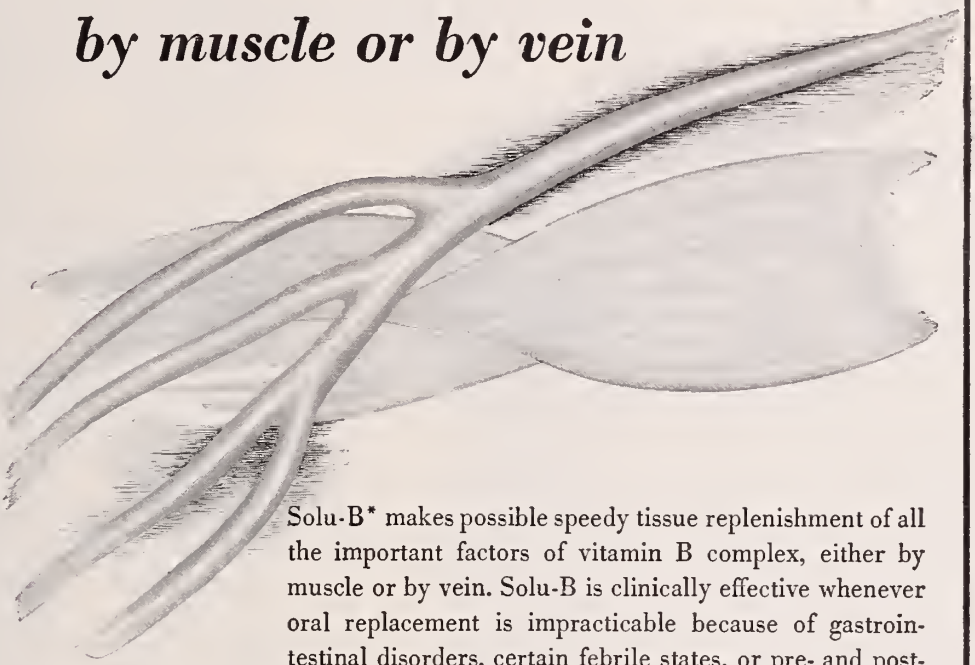

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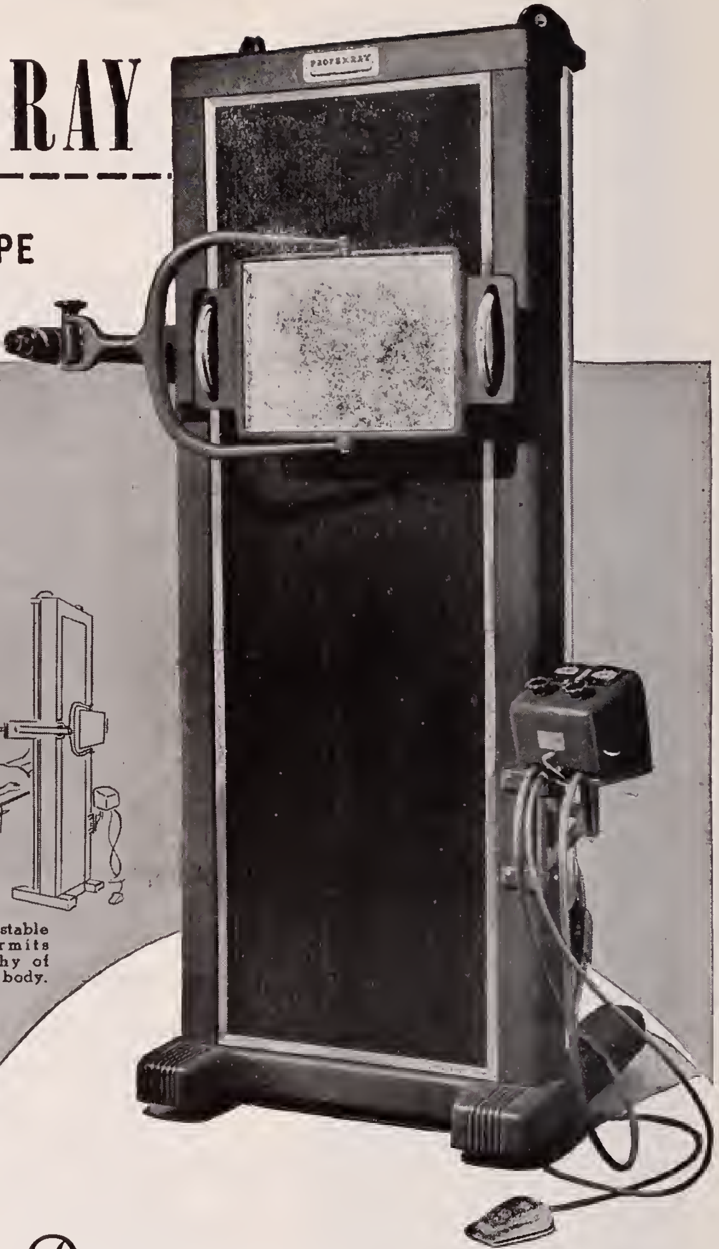

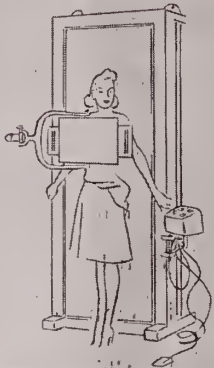

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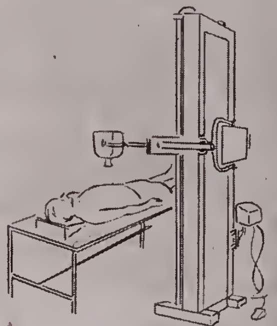

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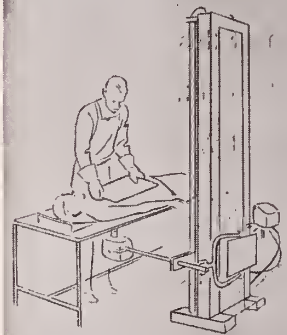

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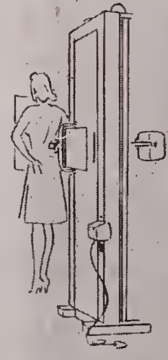

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But now a careful histologic study has been made which reveals a startlingly high incidence of rickets in children 2 to 14 years old. Follis, Jackson, Eliot, and Park* report that postmortem examination of 230 children of this age group showed the total prevalence of rickets to be 46.5%.

Rachitic changes were present as late as the fourteenth year, and the incidence was higher among children dying from acute disease than in those dying of chronic disease.

The authors conclude, "We doubt if slight degrees of rickets, such as we found in many of our children, interfere with health and development, but our studies as a whole afford reason to prolong administration of vitamin D to the age limit of our study, the fourteenth year, and especially indicate the necessity to suspect and to take the necessary measures to guard against rickets in sick children."

*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:1-11, July 1943.

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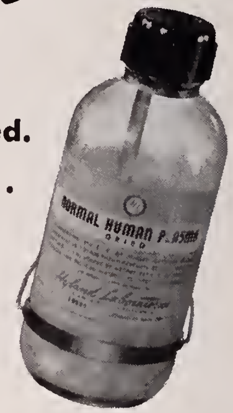

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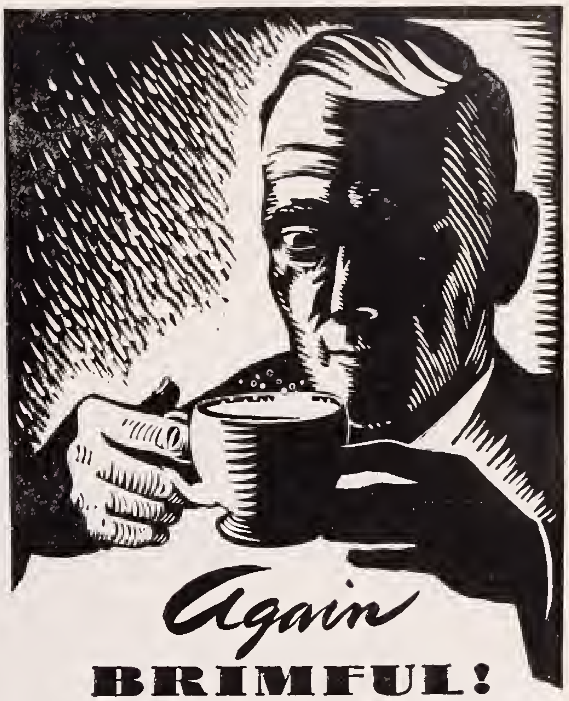

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Portal Cirrhosis: Its Etiology, Diagnosis and Treatment*

GEORGE S. GRAHAM, Jr., M.D.

Birmingham, Alabama

One of the most difficult problems facing the physician is the early diagnosis and satisfactory treatment of portal† cirrhosis of the liver. There are few harder tasks than that of picking out the early cirrhotic from the mass of patients with disease of the gastro-intestinal tract. Because knowledge of the etiology and pathogenesis and pathologic physiology of liver diseases is incomplete, treatment is often inept and worthless. This being true, the early recognition of cirrhosis of the liver is even more important to physician and patient than it would be if one could offer cure to those with late stages of the disease.

It is for these reasons that it is well to consider certain aspects of the natural history of the disease, and to emphasize a therapeutic regimen which is active and optimistic.

First, however, it is well to summarize briefly the functions of the liver in order to understand the basis for certain laboratory aids which test these functions and are useful in revealing disease of the organ.

As far as is known at this time the prime functions of the liver fall into nine main groups. They include: (1) manufacture and excretion of bile acids and bile pigment; (2) detoxification, including chemical modification, oxidation-reduction, methylation, storage and fixation, and reticulo-endothelial activity; (3) regulation of blood volume and blood clotting, including production of fibrinogen prothrombin, and manufacture of all the plasma proteins; (4) regulation of the blood sugar level by conversion of ingested glucose to, and storage of, glycogen, and its release as glucose to the blood stream; (5) protein metabolism, including deaminization of aminoacids, protein storage, and conversion of certain aminoacids to dextrose; (6) fat metabolism, covering desaturation of fatty acids, gluconeogenesis from the glycerin portion of fatty acids, and excretion of ketone bodies; (7) production and utilization of certain enzymes and ferments; (8) modification of certain of the body endocrines, and possible secretion of unrecognized hormones; (9) certain miscellaneous and little understood functions, including the role of the liver in water metabolism, the storage of essential metals, the storage of an anti-pernicious anemia factor, heat regulatory activity, anti-body production, and the conversion of vitamin precursors to a usable form.

The more obscure liver diseases require certain additional steps to establish a diagnosis, but the following rather simple laboratory aids, together with careful clinical appraisal, will be all that is needed in the majority of cases to establish a diagnosis of portal cirrhosis. These tests include the following: (1) quantitative Van den Bergh, (2) icteric index, (3) red and white cell count and color index, (4) bromsulphalein excretion test, (5) cephalin-flocculation or Takata-Ara tests, (6) the x-ray visualization for esophageal varices, (7) tests for bile pigment, urobilinogen and bile salts in urine and stool, (8) examination of ascitic fluid, (9) plasma protein concentration and partition, and (10) response of prothrombin time to intramuscular administration of vitamin K.

With this outline of the essential functions of the liver, and laboratory aids useful in detecting portal cirrhosis, it is pertinent to consider some of the advances which have been made in the study of the etiology and pathogenesis of the disease, for it is through an understanding of these details that the therapeutic approach will become optimistic and dynamic.

I. A Broad Concept of Liver Disease.

Many investigators have pointed out that a broad view of the natural history of the condition is essential. This can best be obtained by comparing portal cirrhosis to the conditions of the kidney known as Bright's disease. Thus, one is accustomed to think of acute nephritis as a disease which may be severe and fulminating, or subacute, or latent. One is accustomed to think of it as a disease which may progress to rapid death, or death after several months or years, or death in a chronic phase after a long span of years, during which there has been either no evidence of activity, or intermittent phases of activity of varying degree. In the same sense, parenchymatous liver disease may be severe and fulminating, and is termed acute yellow atrophy. On the other hand, it may be subacute, either in its onset, or having progressed from the acute stage, include both subacute yellow atrophy and certain cases of true portal cirrhosis. Recovery without damage from the acute and subacute stages of the disease is possible, or there may be damage to the liver of varying degree. Finally, parenchymatous liver disease may be chronic from its onset, or may develop into the chronic phase as a sequel to either or both of the acute or subacute stages. This is the form that one is accustomed to calling cirrhosis of the liver. Just as in chronic nephritis, it may be quickly fatal, or may be latent for long periods up to ten or fifteen years[8], or may progress with intermittent exacerbations to a conclusion within a number of months or several years[9].

---

*Read at Staff Meeting of Baptist Hospital, October, 1944.

†FOOTNOTE: The term portal cirrhosis is used throughout in the sense of Laennec's or interstitial cirrhosis. Biliary and other forms of cirrhosis constitute an entirely separate and distinct group and are included in this discussion.

It is most important to bear in mind this analogy, because it is only by thinking of the disease in these terms that we will be able to understand how it can be produced, diagnose it early, treat it intelligently and with distinct hope of effecting long remissions.

II. THE ROLE OF HEREDITY IN LIVER DISEASE, AND ASSOCIATION OF FAMILIAL AND EXPERIMENTAL LESIONS.

There are two forms of cirrhosis which are hereditary, Wilson's disease, and Rendu-Osler's disease (multiple hereditary telangiectasia)[1].

Wilson's disease is characterized by bilateral symmetrical degeneration of the lenticular nuclei in the hypothalmus with an associated cirrhosis which is usually asymptomatic.

There is increasing evidence that cirrhosis and fatty deposition in the liver may be related to other hypothalmic lesions[2]. These include (1) cerebral tumors accompanied by increased intracranial pressure, (2) Cushing's syndrome, (3) various other lesions of the hypothalmic-hypophyseal pathways.

Observations in rats[4] and in dogs[3] have shown rather frequent development of fatty livers after experimental hypothalmic lesions. Since cirrhosis can also be produced in dogs with experimental hypothalmic lesions, and since fatty deposition is also usually seen[3], it is thus possible to reproduce at will two lesions which are often associated in the human liver. Whether the fat collects in an organ primarily damaged by being cirrhotic, or is related to the cirrhosis as cause and effect, cannot be answered from these experiments[3].

It has been observed that the experimental cirrhosis produced by hypothalmic lesions is similar to a cirrhosis produced in depancreatized dogs maintained by insulin[6]. One-fourth of such animals kept alive up to five and a half years upon an adequate diet and insulin, developed typical portal cirrhosis. This cirrhotic state was preceded by a markedly fatty liver, and the animals in the final stage of cirrhosis had little or no fat in the liver. Thus, the role of fatty changes in cirrhosis, and of brain stem and pancreatic lesions in causing the fatty changes, seems well established.

The second form of cirrhosis which may be considered hereditary is that occurring in multiple hereditary telangiectasia[7]. It is interesting to note in this connection that in a series of sixty-three patients who acquired portal cirrhosis, forty-eight had so-called spider telangiectasia, "vascular spiders"[10].

III. THE ROLE OF ALCOHOL IN THE ETIOLOGY OF LAENNEC'S CIRRHOSIS.

The close association of alcohol and cirrhosis of the liver is illustrated by a recent series of 386 cases, 54 per cent of which gave a history of habitual alcohol ingestion[1]. It has long been a matter of clinical observation that one could frequently elicit an alcoholic history from the patient with cirrhosis. It has been observed that during prohibition years, the death rate of cirrhosis of the liver fell, while since repeal, the death rate from cirrhosis has risen. One of the leading pathologists of the country long taught that there was a specific lesion in the hepatic cell in so-called alcoholic cirrhosis[11], and he postulated that the disease was caused by chronic, low grade, noxious effect of either by-products of alcoholic beverages, or chemicals such as copper released from containers by the action of the beverage.

And yet, there are certain important

reasons why alcoholism, per se, cannot be the sole etiological agent. In the first place, it is a common observation that not all chronic alcoholics have cirrhosis, and in any large group of such persons the percentage is probably small. In the second place, cirrhosis is common in the Far East, while alcoholism is said to be rare. In the third place, many (not all) experimenters attempting to produce the disease in animals by repeated administration of alcohol have failed. Finally, typical Laennec's cirrhosis is seen in children, in whom there is definitely no alcoholic history.

It seems likely that the relationship of alcohol and cirrhosis is as follows[12]: excessive alcohol ingestion may lead to fatty infiltration of the liver, this in turn causing atrophy and degeneration of the liver cells, with subsequent replacement by fibrous tissue and the development of portal cirrhosis. The primary fatty change or fatty infiltration is produced as a result of :(a) toxic action of alcohol on tissue oxidative processes, (b) relative starvation due to the fact that alcohol furnishes a ready source of calories,thereby often displacing food, (c) the vitamin deficiencies often found in, and as a result of, chronic alcoholism, (d) the toxic nature of alcohol together with associated infections or infectious diseases.

IV. THE ROLE OF NUTRITION IN PORTAL CIRRHOSIS.

Although the importance of relative starvation, and of vitamin deficiencies, in the etiology and pathogenesis of cirrhosis is not yet clear, certain important relationships have been established.

It has been possible to produce cirrhosis in rats fed a diet deficient in some factors of the vitamin B complex[13]. Rich and Hamilton[14] produced cirrhosis in rabbits by a basal diet supplemented by vitamins but lacking yeast. While some have felt that this form of disease was due to the absence of choline from the diet, Rich pointed out that choline deficiency produces fatty infiltration rather than cirrhosis.

Lillie, et al[15], found that a cirrhosis of rats could be produced by feeding a low protein, low fat diet. It could be prevented by adding to the diet choline, methionine, and casein singly or in combination. It was then found that[16] a similar cirrhosis could be produced by low protein, high fat diet. Thus, in relation to starvation, it has become apparent that the disturbance of the fat metabolism in the liver is important, and that this disturbance can be produced by a low protein diet, more especially, one low in casein, choline, or methionine, singly or together.

However, from the clinical point of view, these findings must not be taken too strongly. While they would seem to indicate that high protein diets should protect against further disease in a damaged liver and thus be valuable in treatment, it is not at all clear that this is true. In a recent summary of nutritional therapy in liver disease[17], it was pointed out that: (a) Dogs with an Eck fistula can be maintained reasonably well only if the meat content of the diet is kept low; (b) Mann[18] "was able to keep dogs with obstructive jaundice, cirrhosis or a surgically reduced hepatic mass in fairly good condition for many months, but on the substitution of meat for carbohydrate in the diet, ascites and liver failure set in. In sharp contrast to these findings in regard to meat proteins, are the experiments of Bollman and Mann[19] and many others, who have found that casein, the principal milk protein, is beneficial in liver disease, and tends to protect the liver against toxic agents. Therefore, while protein is necessary and protective, it is not clear that proteins other than casein, and those found in yeast, should be permitted in excess.

It has long been known that when the hepatic glycogen reserve became depleted, the organ was more prone to injury by chemicals. It was found by many investigators[18], [19], [20] that preliminary carbohydrate feeding decreased the effect of hepatotoxins, and preliminary fat feeding increased the effect of hepatotoxins. These observations were applied clinically when Jones[21], in 1936, showed that the recovery was quicker and more likely, and ultimate prognosis better in patients with acute hepatic insufficiency when intensive intravenous glucose therapy and high carbohydrate diets were given.

There is little question but that the vitamins play an important role in chronic liver disease. Despite numerous meticulous investigations the entire subject is still in a state of considerable flux. The following problems remain to be solved [17]: (a) the changes in hepatic function and morphology due to vitamin deficiency; (b) the effect of liver disease on vitamin storage; (c) the degree of failure in absorption of vitamins or their precursor substances and impaired conversion of precursor material into the metabolically useful factor.

The following briefly summarizes the more recent knowledge in this field. In chronic, as well as acute liver disease, the plasma and hepatic vitamin A concentration is often low or even absent. Vitamins A, D, K and E are fat-soluble, and in the presence of chronic liver disease, with diminished or slight excretion of cholic acid and bile salts, they are passed through the intestine without absorption. Patients with portal cirrhosis fail partly or completely to convert vitamin K into prothrombin.

More careful clinical trials attest the value of vitamin therapy in cirrhosis, and thereby point the way toward the necessity for including them in any therapeutic schedule.

It is common to observe vitamin deficiencies developing in cirrhosis, and it is also the opinion of careful clinicians that vitamin deficiencies often seem to precede cirrhosis. For example, Petak[23], reported on a group of thirteen chronic alcoholics with cirrhosis of the liver. In the group it was common to find peripheral neuritis, glossitis, anemia and purpura. They were put on a standard diet of C-305, P.102, F-120, and standard medication affording concentrated sources of the B complex, yeast, and vitamins A, D and C. Three died, and ten of the thirteen made steady improvement, characterized by partial or complete recovery from associated avitaminotic lesions, and signs and symptoms related to the primary cirrhotic lesion.

Ratnoff and Patek[1] have therefore suggested that the relationship between alcohol and cirrhosis of the liver might be due to coexisting nutritional deficiency in a manner analagous to alcoholic beri-beri and alcoholic pellagra.

In summary, then, it may be said that it is possible that cirrhosis is a nutritional deficiency disease, related either to deficiencies in certain necessary proteins, or to deficiencies in certain vitamins, or to both. It must be borne in mind, however, that while the nutritional element figures in some[24], it is not important in all of the cases of "idiopathic" cirrhosis.

V. THE ROLE OF MISCELLANEOUS TOXINS AND DISEASES IN CIRRHOSIS.

The following toxins or diseases may at times be responsible for the development of cirrhosis of the liver: syphilis, schistosomiasis, cinchophen, carbon tetrachloride, arsenic, tetra- and tri-chlorethane, copper, furfural, and rarely diabetes mellitus, thyrotoxicosis, glycosin disease, amyloidosis, and hemachromatosis.

Observe that catarrhal jaundice or epidemic hepatitis is not included in the above list. It is possible, as a result of studies recently reported[25], that complete restoration of hepatic parenchyma occurs in nonfatal cases of epidemic hepatitis. It is known that regeneration is usually complete in liver damage, providing that destruction is acute and injury not continued, and providing that destructive changes involve only the hepatic cells, not the framework or vessels. This is the case in epidemic hepatitis.

Just as the key to the successful treatment of portal cirrhosis lies in a thorough understanding of its pathogenesis and pathologic physiology, so the key to the early diagnosis lies in the evaluation of the signs and symptoms and laboratory tests. Too much emphasis cannot be placed on the fact that treatment can be successful, and that for that reason early diagnosis becomes even more important. Patek, as previously noted, has reported extremely encouraging therapeutic results utilizing a dietary and vitamin approach to the problem. The therapeutic outcome would be even better if one could establish the diagnosis in the large group of "silent" or "compensated" cases. Reliable investigators[26] have reported that one-third to one-half of all cases of cirrhosis are asymptomatic or latent, and it has been inferred from careful studies that the course of the disease is not necessarily one terminating in eventual liver failure.

The signs and symptoms of this early type of cirrhosis — compensated cirrhosis — are vague. Unfortunately, they tend to be signs and symptoms which are most frequently recited to the physician by patients with gastro-intestinal neuroses, mild gastro-intestinal ailments, and psycho-neuroses

They include[24] anorexia, nausea, vomiting —often early morning vomiting, abdominal pain of varying nature and location, chronic fatigue, weakness. There may be intermittent diarrhea, or constipation, or chronic headaches, or bad breath, or coated tongue. Before the onset of ascites, and after the development of advanced anatomic changes, the symptoms include the following[27]: flatulent indigestion, jaundice abdominal pain, weight loss, weakness, diarrhea. Night blindness or gynecomastia or testicular atrophy may afford a lead in latent cirrhosis. Loss of body hair, epitaxis, muddy complexion, and melena may bring the patient to the physician.

One of the most reliable signs in compensated cirrhosis[28] is an enlarged liver, and much dependence must be placed upon it. However, one may suspect the disease in the presence of any of the following: (a) clubbing of the fingers without other obvious causative factor; (b) spider telangiectasia[10]; (c) muddy complexion with splenomegaly; (d) swelling of the feet and ankles not satisfactorily explained by other conditions; (e) unexplained hydrothorax; (f) dilated abdominal veins; (g) signs of peripheral neuritis; (h) unexplained fever.

The clinical recognition of decompensated cirrhosis is a relatively easy matter, although it is surprising at times how difficult it may be to differentiate such apparently widely separated conditions as primary cardiac decompensation, cirrhosis of the liver with ascites, and peritoneal carcinomatosis. Further, the differential diagnosis of portal cirrhosis from such conditions as hemochromatosis, carcinoma of the biliary tract, biliary cirrhosis, and certain other lesions may at times tax all resources of clinical acumen and laboratory skill. In the main, however, a typical case of portal cirrhosis in liver decompensation is a picture which is usually characterized by certain definite symptoms and signs.

The commonest first symptom in one-fourth to one-half of the cases is the insidious onset of abdominal swelling[1]. There may be pain of any type or location, or there may be no pain. Sudden hematemesis may be the first evidence of disease in 10 per cent[1]. Edema of the ankles will be found in 60 per cent[29]. There is a palpable liver in 50 to 75 per cent[29]. Roughly 10 per cent of patients will experience an onset with jaundice. There is rapid weight loss, associated with anorexia; the weight loss may be masked by the edema and ascites. The hepatic facies is characteristic. There may be melena, unassociated with hematemesis. There are general gastro-intestinal complaints, and there may be a good ulcer history. In fact, a surprising number of patients with cirrhosis, have an associated ulcer.

On examination there may be any or all or any combination of the following: ascites, edema, hepatomegaly, splenomegaly, dilated abdominal veins, venous hum, friction rubs over spleen or liver, jaundice, vascular spiders, pleural effusion, peripheral neuritis, mental changes, fever, and anemia.

Laboratory examinations may reveal any or all of the following: elevated icteric index, leukopenia, anemia of varying type, positive cephalin-flocculation and Takata-Ara tests, positive dye excretion tests, diminished serum albumin with elevated serum globulin and reversed A/G ration, positive tests for bile in urine, positive colloidal gold test, esophageal varices on x-ray examination, ascitic fluid with specific gravity of a transudate, linear marking of calcified splenic vein thrombosis on x-ray, and a specific response of prothrombin time to vitamin K administration. Obviously, there are many more laboratory aids which may be employed, but the above, together with the results of the barium meal and barium enema, are sufficient to establish the diagnosis in almost all cases. In fact, it will not often be necessary to employ all the tests mentioned, and often a diagnosis can be made on the basis of a good history, a good physical examination, and a good index of clinical suspicion.

With the diagnosis thus established, immediate and vigorous therapy must be instituted. I have observed ten carefully worked-out cases of portal cirrhosis in recent months, both in private practice and on the medical service of the Hillman Hospital—eight of these made clinical recoveries which were complete or nearly complete at the time the patient was dismissed. One patient died in an advanced stage of liver failure when it became impossible to supply her further with daily plasma infusions. The other died following administration of a sixth of a grain of morphine which had been given for sedation following a moderate hematemesis.

The approximate schedule of treatment which has been evolved is as follows:

Diet: high carbohydrate, medium protein, low fat. Milk three times daily. Cheese three times daily. Hard candy at the bedside. Fruit juices three times daily between meals and at bedtime.

Intravenous glucose saline, with added thiamin hydrochloride, every twelve hours during the severe stages, and daily as recovery progresses.

Plasma—500 cc. every other day. Alternate with whole blood for anemia.

Vitamins—intravenous thiamin, nicotinamide, and cevitamic acid. Concentrated yeast tablets by mouth. Multi-vitamin capsules by mouth (with bile salt once daily, alone twice daily), vitamin K subcutaneously daily.

Diuretics—only if absolutely necessary for relief of rapidly recurring ascites, or ascites not responding to the measures instituted earlier. Preferably aminophylline, or theophyllin calcium salicylate, or similar xanthine preparations.

Paracentesis—same indication. No need for readministering the ascitic fluid withdrawn, unless supply of plasma is precarious, or unless ample time and equipment are available.

Crude liver extract daily, alternating with refined liver extract.

Sedation with barbiturates—never with opiates unless patient moribund.

Saline laxative p.r.n.

Bed rest, with bathroom privileges as compensation occurs.

With this régime, one can offer much in the way of temporary, perhaps protracted, cure in the sense of freedom from the signs and symptoms of decompensated portal cirrhosis.

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Head Injuries*

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THE QUESTION of what to do with the patient with an acute head injury has always been, to my mind, one of the most interesting, and at times, one of the most confusing, confronting the medical profession. Of course, the ideal solution would be to have the neurosurgeon assume responsibility for all these cases;but since the neurosurgeons are rather few and far between it falls to the lot of the man in general practice to treat the great majority of patients who have unfortunately suffered a severe injury to the head. It is conservatively estimated that about 600,000 people suffer severe head injuries each year in this country, and that one third of them prove to be skull fractures. These have an average mortality rate of ten per cent for the serious injuries without fracture and a thirty per cent mortality in the cases of fractures of the skull. This means, in other words, that approximately 100,000 people lose their lives each year from brain injuries. Thus it is very apparent that this one type of injury is a major problem within itself.

The literature on the treatment of head injuries is most interesting: the pendulum has swung back and forth several times with reference to conservative versus radical treatment:

> In 1900 the question was to trephine or not to trephine. Then came subtemporal decompression versus spinal puncture. Then between 1920-1930 the idea of dehydration was popularized after Weed and some co-workers discovered that hypertonic solutions put into the blood stream would reduce the edema of the tissues, as well as the volume of the cerebro-spinal fluid.

Over a hundred years ago the foundation of our therapy for brain injuries was laid down by what is known in the literature as the Monro-Kellie Doctrine. In simple words this was that the three elements making up the contents of the cavity of the cranium are the brain, the blood and the cerebrospinal fluid: that the total contents must be approximately equal at all times and that if an increase or a decrease in any one of these elements occurs, it would immediately cause an alteration in the remaining two elements as a compensatory reaction.

It was this principle that acted as a guiding light for the investigators who were searching for some effective way to combat increased intracranial pressure, since it was known that this was one of the chief factors in the mortality rate. In 1902 Quincke effectively demonstrated that the volume of the cerebro-spinal fluid in the brain could be reduced by withdrawing spinal fluid from the lumbar region of the spine.

The establishment of these two principles, namely that of dehydration and spinal puncture, has meant more in the handling of the severe head injuries than anything else to this date. Yet, there are still a great deal of diverse opinions as to the indications for and against spinal puncture, as there is also great variation of opinion as to the amount of spinal fluid to be withdrawn when the puncture is made, and how often the puncture should be repeated. The question of herniation of the medulla into the foramen magnum is always the ever-present possibility whenever any quantity of fluid is withdrawn.

This paper is not intended to be scientific nor its purpose to propound any new theories. I would like to emphasize the one point that head injuries cannot be treated as a group according to whether they have a laceration of the scalp, a mild or severe concussion or a fracture of the skull, whether depressed or non-depressed or compound. In fact, there is nearly always a combination of two or more of the above conditions existing in every injury of any consequence. Head injuries, more than any other type of injury, should be individualized as specific cases rather than certain cases falling into certain groups. The severity of the initial injury is no index of the outcome of the case.

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*Read before the Section on Surgery at the Mississippi State Medical Association, May 10, 1944, Jackson, Miss.

A few years ago on the same morning and within the same hour two head injuries were brought in. The first was a painter who had fallen from a twenty-foot ladder onto a concrete drive, landing on his head. X-rays were not necessary to make the diagnosis of fractures of the skull, for these could be felt very easily since they were multiple and some were displaced. The other patient was a woman who alighted rather hurriedly from a truck that had caught on fire. The truck had practically stopped, but she was thrown off balance when she stepped to the ground and she fell backwards striking her head on the gravel road bed. There was no fracture of the skull, as proved by x-rays later, but there was some blood in the spinal fluid. This patient died within the first twenty-four-hour period, while the painter with multiple fractures survived and is still painting.

I feel that every case of head injury should be treated individually. We have certain general principles in the treatment of head injuries but no fixed rules. The following are some of the things I believe in very strongly when confronted with a patient who has just been brought in following a severe head injury:

> Do not add insult to injury by rushing patient to the x-ray room for complete x-rays of the head. The immediate treatment is not going to be influenced by x-ray findings. I believe in x-rays, most certainly, but often they are made just before the patient leaves the hospital, and then for medico-legal records, chiefly. Drs. Mock and Mock have called attention to the fact that the first six hours are the most dangerous period of cerebral shock. Every patient with a head injury should be treated as a case of potential shock for the first hour or two, unless hemorrhage is present, and certainly this is no time for x-rays.

As a general rule morphine is to be avoided, as this will mask the picture and adds to respiratory depression. Some of the milder sedatives should always be tried thoroughly before resorting to morphine.

A full bladder will cause as much restlessness in an unconscious patient as in one who is conscious. This should always be watched for and treated as indicated.

Fifty cc. of 50 per cent dextrose in the vein is one of the most effective means of restoring blood volume in shock. This should be followed by isotonic solutions of saline and glucose if indicated. If the shock is due to the loss of blood, plasma or whole blood should be used.

Antitoxins and serums are not necessary in this first six-hour period; they should be given at a later date when indicated.

The suturing of extensive scalp wounds, or the reduction of associated fractures should not be done during these first few hours, except when hemorrhage is present.

The pulse, respiration and blood pressure should be recorded every thirty minutes to one hour and temperature at hour intervals. Any pupillary changes should be noted.

The earlier spinal puncture is done, when it is indicated, the lower will be the mortality rate. This at times can be one of the most gratifying of all procedures. I remember quite well being called to the hospital one morning about three o'clock to see one of the popular young men about town who had been in an automobile wreck; his condition looked critical; the skin was cold and clammy; he was extremely restless and delirious; the blood pressure was low, especially the diastolic and the pulse was very rapid and weak. Stimulant of caffeine and sodiobenzoate and atropine had been given before my arrival. Fifty per cent glucose was given and this was followed by an infusion of five per cent glucose in normal saline. In spite of these measures the patient grew progressively worse. A spinal puncture was done and 50 cc. of bloody fluid was withdrawn. When the needle was removed and patient turned over he recognized all persons present in the room and began to talk rationally; his recovery was very satisfactory. X-rays at a later date showed multiple fractures of the vault. Similar occurrences have been experienced a number of times in years past.

For later use as a dehydrating agent where intracranial pressure or edema of the brain is suspected, magnesium sulphate by mouth or per rectum is very satisfactory. This can be given in repeated doses of four ounces of a 50 per cent solution by rectum with most excellent results, usually. The fluid intake should be carefully controlled at the same time.

In the past three and one-half years, since the beginning of Camp Shelby, the writer has personally looked after approximately two hundred cases of head injuries requiring hospital attention. These have varied all the way from the very mild concussion with perhaps no objective signs on the head to the crushing injuries of the skull where the brain contents have been partially dislodged. Some few have required surgery where there was a depressed fracture that was doing violence to the brain structure. One of the most interesting of these was a nine-year-old boy who was riding his bicycle and ran into the side of a moving taxi. The handle of the door of the taxi caused a compound fracture of the frontal area on the right side, midway between the orbital ridge and the hair line. Some of the brain substance was lost. The child's condition was critical but after stimulants and intravenous glucose and blood had been given the wound was opened and débrided, several small pieces of bone removed from the brain substance, the dura sutured and the bone fragments fitted together over the opening. The scalp was closed with drainage, and after the first twenty-four hours, convalescence was smooth and satisfactory. The boy is apparently normal in every respect at present.

There have been several gunshot wounds of the head in this number. A recent one was a young woman who was pregnant. She and her husband were playfully tugging at a 22-calibre pistol which went off and the contents of the shell struck the woman in the forehead just over the left eye. The cartridge did not contain a bullet, but a number of fine shot. These penetrated the frontal sinus, the postorbital space and into the frontal lobe of the brain, according to x-rays made at a later date. She was badly shocked and the left eye ball soon protruded greatly. She was seen by an eye man who was very pessimistic about the sight in the eye. After recovering from the shock, her recovery was uneventful. No attempt was made to remove the shot from the brain. Within the past month she delivered a normal full-term baby.

Time will not permit me to go into these various cases from a statistical point or to discuss the surgical details, which are most interesting. My chief thought is to avoid trying to group the head injury patients into fixed cases, but treat them individually as each case warrants.

SUMMARY

1. Combat shock.
2. Control hemorrhage.
3. Use stimulants when indicated.
4. Avoid the depressing effects of morphine.
5. Do not be too hasty for x-rays.
6. Avoid an over-distended bladder.
7. Spinal puncture is often a life-saving measure where indicated.
8. Dehydration by intravenous glucose or magnesium sulphate per rectum is invaluable.
9. If conditions warrant, surgery should not be delayed too long.
10. Remember that the first six hours are the most critical and the mortality rate is highest during this period.

DISCUSSION

Dr. S. L. Bailey (Kosciusko) — This splendid paper is of interest to all of us who practice medicine and more especially where hospital facilities are available for the care of recent injuries. In spite of the fact that few of us who do brain surgery to any appreciable degree, we are called upon to treat cases requiring some brain surgery and I believe we see rather uniformly good results from these cases.

Statistics vary somewhat in a general way, but we may say that about 70 per cent of skull injuries get well with little or no treatment, 20 per cent die regardless of treatment and only 10 per cent are left for careful treatment and study. I feel that this latter group makes up the patients who require our utmost skill and ability.

A study of certain signs of cerebral decompensation as described by Dendy will be of much help in all cases. These are:

(1) coma—is patient conscious or unconscious.
(2) restlessness.
(3) temperature — the greater the temperature the greater edema.
(4) pulse — the slower the pulse the greater the edema.
(5) respiration — rate, type, difficulty.
(6) blood pressure — the greater in injury the higher the systolic pressure. Pressure under 80 usually means shock.
(7) sphincter tone — a patient with no tone of anal sphincter is practically moribund. The sphincter ani is one of the last muscles to relax under anesthesia.

As regards treatment I believe there is one most important decision to make before we begin any treatment. Is our patient in shock? Many of these injuries are associated with serious injuries in other parts of the body. If the patient is in shock, then treat shock and forget temporarily the head injury. (1) Lower head and keep it low so long as shock persists. (2) Maintain body temperature. (3) Supply fluids in large quantities. Once shock is overcome, treatment may be carried out for the head injury. As we know, immediate operation for head injury is rarely required, the only exception being in case of extradural hemorrhage and of penetrating injuries of the brain. Once treatment for shock has ended and that for cerebral edema begun, our plan might well be (1) raise head, (2) ice bag to head, (3) dehydration *a*) retention enema *b*) intravenous hypertonic glucose, (4) lumbar puncture, (5) subtemporal decompression.

The primary purpose of operation for injuries of the head is to prevent infection or to relieve compression of the brain. In many cases a stubborn, extensive infection of the scalp and cervical glands may result. Erysipelas, osteomyelitis of the skull or brain abscess and meningitis may result from an improperly treated laceration of the scalp. The late effects, traumatic epilepsy, etc., of some of these cases present somewhat of a psychiatric problem but relatively few of them occur. Convulsions following depressed fractures more frequently result from the injury of the brain when the fracture occurred, than from continuing depression of the bone.

The ninth annual celebration of Social Hygiene Day is on February 7, 1945. The medical and public health procedures which, if faithfully applied, will check any increase in these infections and reduce their prevalence, are known to the doctor and health worker. Let us all disseminate the knowledge in every way we can, privately and in the forum.

Clinics and special treatment centers are located throughout the country to provide the most modern methods and the latest drugs to combat these iniquitous maladies.

The Mississippi State Board of Health is doing great work in this and all other public health work.

—Minor

If ever the human race is raised to its highest practicable level intellectually, morally, and physically, the science of medicine will perform that service.

—Descartes.

Cysts, Sinuses, and Nodules of the Neck*

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These lesions of the neck have been neglected by us as general surgeons, and while my subject is a broad one I believe it is worthy of a general review in its entirety. I believe you will be interested and perhaps chagrined at the facts the statistics reveal. In order that the various lesions of the neck may be differentiated there is no doubt that most of them should be recognized earlier. Correct surgical procedures are much more difficult after inadequate procedures have been done. Certain surgical lesions are rare. Most of these I will mention. It is the classification and treatment of the more common lesions that should be approached more carefully.

The largest group of cystic lesions of the neck, exclusive of the thyroid gland, are congenital in origin and should be recognized and managed correctly in infancy and early childhood; but it is still true that most of these lesions go unrecognized until adult life, or if recognized, are not properly treated. It is admitted that even though congenital in origin they may be quiescent during childhood and become active later, but by far the largest number of cases give symptoms early and frequently go unrecognized. I have observed many such cases and later in this paper I desire to report one which I think is unusual enough to deserve special mention. I have been able to locate only two similar cases reported in the literature.

Surgery of the thyroid gland is a field unto itself, and I will mention it only briefly. Graves' disease or exophthalmic goiter is the most common lesion and very readily recognized by the characteristic clinical syndrome. All agree that this is a surgical lesion, though in certain poor risks x-ray therapy plays a valuable adjunct. It is the isolated cyst, cyst adenoma or the nodular gland, to which I would call your attention. These lesions when first recognized should be considered surgical lesions. It has been preached for years that in the early stages of these conditions the basal metabolic rate is of absolutely no value and especially so if it be normal. Still there are those among us who depend on the basal metabolic rate for evidence of thyrotoxicosis. All nodular thyroids should be removed before they become toxic or before malignant degeneration has taken place. At the present time there is under my care a woman with a carcinoma of her thyroid gland. She is getting palliative deep therapy. She is known to have had an isolated nodule in this region for many years.

There should be no mortality from surgery of the thyroid gland if it is correctly managed; though it still may be necessary to resort to multiple operations in spite of good preoperative therapy. I think it may be truly said that a surgical thyroid death in all probability means that too much has been done. These various types of goiter are very much more common in our section of the country than was once thought.

CONGENITAL CYSTIC LESIONS

Hygroma. This is still a fairly rare lesion; however, as the condition is being better understood there is a more rapid accumulation of case histories. Until 1935 there were less than 150 of these cases reported in all of the surgical literature. In recent years more attention has been called to hygroma and there are now well over 200 cases reported.

A hygroma is usually a multilocular cystic tumor containing a serous fluid and lined by endothelium. It occurs most commonly in the posterior triangle of the neck, and this is perhaps the most important diagnostic point. I could find no case of hygroma reported which occurs in the anterior triangle. The frequency at what level of the neck it most commonly occurs is in dispute, but when occurring in the neck it always is behind the anterior belly of the sterno-mastoid muscle or in the posterior triangle. It may also appear in other regions of the body such as the axilla or the groin. Recognition is usually not difficult. It may be confused with sebaceous cysts, but a multilocular soft cystic mass is rather rare in any part of the body, and sebaceous cysts are apt to be more superficial.

Hygroma is known to grow from lymphatic rests which can be identified in the embryology of the lymphatic system. These cystic masses most commonly appear in infancy and early childhood, though the rest may be present and not develop until adult life. When they once appear they are rapidly growing tumors and because of the rapid growth they promptly involve vital structures of the neck and mediastinum. The mortality rate until recent years varied up to 60 per cent. The early surgical experience with these cysts was very disappointing and until the last four or five years the mortality was very much lower when x-ray therapy and radium were used. It is a curious fact that many undoubtedly authentic cures have been reported when the mass was incompletely removed due to the technical difficulties, and the remnants were packed with sclerosing substances. It is also interesting to note that these cysts are apparently much less radio-resistant in childhood than in adult life. As anesthesia and technique have improved, the surgical eradication of these cysts has been much more successful. Gross and Goeringer of Boston in 1942 reported twenty-seven cases with a mortality of two, or something less than 10 per cent and both of these cases had previous infections. When unrecognized or untreated, secondary infection with extension and bacteremia are common and mortality is high. In spite of the group of cases just mentioned some still feel that x-ray and radium are the proper therapeutic measures.

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*Read before the Northeast Mississippi Thirteen Counties Society, September, 1944. Amory, Miss.

BRANCHIAL CLEFT CYSTS AND SINUSES

As previously mentioned, the clinical picture of branchial cleft cysts often goes unrecognized, particularly so in children. The great majority of these cysts do appear in childhood, and in spite of many warnings in the literature, all too frequently they are still mistaken for localized abscesses or broken down lymph nodes and are repeatedly incised and drained. In the anterior portion of the neck any localized, fluctuating or inflamed area must be treated with the greatest respect.

These cysts and sinuses spring from the pharyngeal pouches. In the gill-bearing animals these pouches normally form the gills, but in mammals they close off to form parts of the bony cartilaginous structures and certain soft parts of the neck. In mammals the cysts and sinuses under discussion are the abnormal remnants of the pharyngeal pouches. Some feel that they are remnants of the thymic duct, but for the purpose of surgical classification this is unimportant.

Many classifications have been made, but practically they are one clinical entity. They should be early recognized and eradicated surgically. Injection methods have proved unsatisfactory. The cyst usually manifests itself as a painless swelling and may give no symptoms until secondarily infected. These may be pressure symptoms such as difficult breathing or swallowing.

The clinical picture of the branchial sinus is that of a periodically draining sinus tract in the anterior part of the neck which drains a mucoid or purulent material as it becomes secondarily infected. It may close off and this process be repeated intermittently for years. In differentiating these lesions it is most important to note that they always occur along the edge or just under the anterior belly of the sternomastoid muscle. One case is reported with the sinus opening behind the ear and the sinus opening may be as low as the clavicle. They are practically always unilateral. The cysts are always unilocular as contrasted to hygroma and other lymph adenopathies of the neck.

The diagnosis of branchial cysts and sinuses is frequently difficult. Lahey in 1941 reported that only 57 per cent of the cases seen in his clinic were correctly diagnosed previous to operation. Many conditions may be confusing, but with proper study they should be differentiated. Conditions with which they are most frequently confused are 1) hygroma—the differentiating features of which have just been mentioned, 2) dermoid cysts—these cysts are usually more superficial and are finally recognized by their contents, hair and other foreign elements, 3) lipomata—no difficulty here because of the lobulated characteristics of lipomata and the differences in their consistency, 4) tuberculosis adenitis, 5) deep cervical abscesses, 6) Hodgkin's disease, in which cases biopsy may be necessary for differentiation (undesirable unless absolutely necessary), 7) carotid bodied tumors. These are always found at the bifurcation of the carotid vessels and are characterized by a very firm consistency. There are other rare conditions which should be considered such as actinomycosis or cervical metastatic lesions which will be mentioned later.

One case is reported of a child five years of age who had a severe cough of two years' duration. This cough was not relieved by any medical procedures. Finally a branchial cleft fistula was excised which was found adherent to the recurrent laryngeal nerve. Following excision the cough was immediately and completely relieved.

The following is a report of a somewhat similar case. Mrs. W. O. M., age forty-three, was admitted to the hospital with a severe spasmodic cough. The cough was not productive. Otolaryngeal examination was negative. Clinical examination and chest film were negative. She had passed the menopause. She was the mother of a large family and her past history was good.

The cough had begun rather suddenly about one month before and was not relieved by any sedation. She had lost fifteen pounds in weight. Examination revealed a rather tense cystic mass in the right side of her neck three to four cms. in diameter. It was about the level of the crycoid cartilage and under the inner border of the sternomastoid muscle. It was not very painful. Very slight pressure over the cyst caused paroxysms of coughing.

On being further questioned the patient stated that this mass had been present since childhood. She had consulted physicians about it many times but was always told to leave it alone. Under general anesthesia a collar incision was made. The mass was dissected free up to the tonsillar fossa. Immediately following operation her cough was relieved and there has been no return of symptoms.

THYROGLOSSAL CYSTS

Embryology. The primordium of the thyroid gland arises as an examination of the ventral pharyngeal wall. The primitive thyroid gland descends in the midline through tissue which later becomes the hyoid bone. The tract formed by this descent normally is obliterated.

A thyroglossal cyst is a cyst which arises in a portion of this duct. Hence this cyst, though always in the midline, may occur anywhere from the base of the tongue to the thyroid gland. Clinically it occurs much more frequently below the hyoid bone than above. The cyst often ruptures spontaneously and forms a sinus; however, it is more often incised and forms a sinus. Sistrunk described and advocated the radical removal of the sinus by resecting a portion of the hyoid bone and coring the base of the tongue. This operation was described in 1920. The radical removal correctly done is universally successful since then. Yet, Pemberton, reporting a series of 293 cases at the Mayo Clinic, found that well over half of these cases had had inadequate surgical treatment previously, and about one-fourth of them had been treated by simple incision and drainage.

CLASSIFICATIONS OF LYMPH GLANDS OF THE NECK

A. Local Enlargement:
  1. Lymphadenitis, secondary to infection such as acute upper respiratory infection or stomatitis or furunculosis or other infections of the head, neck or face.
  2. Tuberculosis adenitis
  3. Early Hodgkin's disease
  4. Lymphosarcoma
  5. Secondary carcinoma where the primary lesion is about the mouth or nasopharynx.

B. Generalized Enlargement:
  1. German measles
  2. Syphilis
  3. Infectious mononucleosis
  4. Lymphoid leukemia
  5. Advanced Hodgkin's disease

It will be noted that it is the local enlargements with which we are primarily interested.

Usually the diagnosis of secondary lymphadenitis is of little difficulty. The infection is usually recognized, and the patient is usually acutely ill. The swollen glands are apt to be discreet. They are always tender. They are usually not important and disappear when the infection subsides.

There is the exception of the very ill child where masses of secondary glands extend down one or both sides of the neck and into the mediastinum. I know of no way of making a specific diagnosis without a biopsy, to which we do not like to resort. The possibility of tuberculosis, rare infection, and these other conditions under discussion are considered, and usually after several anxious days or even weeks these glands begin to regress. It is to be noted that when indicated, these glands will very satisfactorily respond to light doses of x-ray therapy.

TUBERCULOSIS GLANDS OF THE NECK

This is a fairly frequent form of cervical adenitis. Diagnosis is usually easy but may be confused with the above or with lymphosarcoma on the one hand or Hodgkin's disease on the other. Characteristically the enlargement of tuberculosis glands begins at the angle of the jaw. The increase in size is usually slow but steady. It commonly extends to the submaxillary and deep cervical glands. The early stages of tuberculosis glands of the neck present few symptoms and the patient is frequently unaware of their existence. They are most common in childhood; may lie dormant for years and be exacerbated in adult life. Most frequently they spontaneously regress with proper supportive treatment but may go on to cold abscesses and sinus formation. Occasionally when they do not subside these glands may be radically resected. It is again to be noted that x-ray therapy is of great value in this condition. Sometimes surgery and x-ray may be combined.

HODGKIN'S DISEASE

Clinically, Hodgkin's disease manifests itself most characteristically in adolescence and in the early adult life. Usually it is a localized group of glands. The supraclavicular glands are most frequently involved. They may limit themselves to one group of glands for several weeks or even months but eventually there is generalized lymphadenitis. We are all familiar with cases in which the involvement is first in other locations, notably the axilla, but as stated the supraclavicular is the most frequent. The glands have a characteristic elastic feeling not unlike the feel of rubber. This is the most common specific characteristic of the disease and gives the strongest possible diagnostic lead. It is in the early stages that it is most difficult to differentiate from tuberculosis. Later on in the disease the glands become more firm, matted together, and lose this characteristic rubbery feeling.

Of course biopsy is of great value and yet throughout the years we have been accustomed to the remark that the microscopic pathology of Hodgkin's disease is so variable there is no typical picture. It is most difficult at times to differentiate microscopically between Hodgkin's disease and tuberculosis, or even lymphosarcoma. The literature is full of mistaken microscopic diagnoses.

LYMPHOSARCOMA

This lesion, as those above, occurs usually in early life. Unlike Hodgkin's disease and tuberculosis it usually begins in the tonsillar or adenoid tissue and the nasopharynx. The glands of the neck are secondary. Malaise and fever are not common early symptoms. The microscopic picture from biopsy is usually typical. This condition responds readily to x-ray therapy, but relief, of course, is only temporary. A fatal termination is much more rapid than in Hodgkin's disease in which palliative therapy may be used sometimes over a long period of time.

SECONDARY CARCINOMA

There are many mistakes in diagnoses even from the best pathologists where the clinical history and related physical findings are not properly correlated. Martin of New York makes a statement that in 10 per cent of all malignancies of the nasopharyngeal and oral cavity, the first clinical manifestation is enlargement of the cervical lymph nodes. He cites several cases in which diagnosis of Hodgkin's disease was made from large cervical nodes only to find a malignancy of the base of the tongue or nasopharynx a short time later.

In secondary carcinoma there are usually a few hard moderately enlarged glands. These early become fixed and ulceration of the skin occurs fairly often. I have never seen this ulceration of the skin occur spontaneously in the other groups of adenitis under discussion. The fixations of the skin, late ulceration and the fact that they almost never become very large are rather characteristic. There is the occasional sentinel gland at the head of the clavicle which may give a clue in carcinoma of the stomach.

There are a good many cases of undoubtedly secondary carcinoma of the glands of the neck reported in which the original tumor was never located. In secondary carcinoma early biopsy and early radical complete dissection of glands of the neck should be done. Kennedy states that mortality has improved but little since this has been known because most of us are too timid in our resections.

GENERALIZED ENLARGEMENT OF LYMPH GLANDS OF THE NECK

Most generalized enlargements occur in the acute or sub-acute infections with which we are not primarily interested surgically. Martin makes this statement that glands up to one cm. in diameter may be normal. I personally doubt this. Of course we all see cases with one or more small groups of palpable glands in which no pathology can be demonstrated. In some cases, however, it is difficult to differentiate microscopically a gland that is chronically infected from the apparently normal gland. My own feeling is that these cases are secondary to previous infections which are dormant or in which the primary infection has been removed. The very fact that there are groups of these cases in which there is no apparent pathology is the greatest pitfall in diagnosis. All too frequently generalized lymphadenopathy may not be investigated for too long.

OTHER GENERALIZED ENLARGEMENTS

German Measles. The gradual enlarge-ment usually comes on before the rash; quite widespread; not usually painful or tender; the patient may not be aware of the presence of these glands. They usually subside as rapidly as they appear.

Infectious mononucleosis. Etiology of infectious mononucleosis is unknown. Interestingly enough it has been said to occur most frequently in young doctors and nurses. It begins with general malaise, sore throat, and fever. The glands are early enlarged and tender, submental glands usually first. There is diffuse inflammation of the tonsils and pharynx. The gradual enlargement usually subsides in two or three weeks.

Leukemia. The onset is gradual but later the course more rapid. Weakness and palor are more characteristic of this than the other lesions here noted. Other areas than the neck may be involved, and enlarged glands are apt to appear all over the body sooner or later. The spleen is enlarged in varying degree with the acuteness of the disease. The blood picture usually makes the diagnosis but may be deceptive in the early stages.

SUMMARY

A general review of surgical lesions of the neck is presented. The surgical results of cystic lesions of the neck are not what they should be with the present knowledge.

An unusual case history of branchiogenous cyst is reported.

Biopsy when indicated should be done promptly but nice judgment is required because it may be even contraindicated. In a surprising number of cases the microscopic picture is inconclusive and diagnosis may be made only on subsequent developments. There is improvement in the mortality and morbidity as surgery and x-ray therapy are more closely allied.

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DISCUSSION

Dr. E. C. O'Cain, (Winona)—Dr. Doster has so well covered this subject that unless we were to discuss these many infectious diseases that might involve the neck, there is little to be said, and should one start on these, discussion would carry us too far afield for the limited time we have.

Thinking over the papers I have heard, I believe this is the first paper I have ever heard devoted to the structures of the neck alone. Usually all consideration is directed to the thyroid gland and one can not help but wonder why so many things that occur in the neck day in and day out are never brought to our attention.

If privileged to do so, I would like to cite one case in which the pathological condition of the neck was grossly misjudged.

A woman in her forties had suffered for a number of years with a pain in her neck, slightly over the shoulder, and she had some slight matting on deep pressure that gave many good doctors a chance to guess over a number of years before she finally came to us for an x-ray. The x-ray revealed a supernumerary rib that came up high and had wound closely down over the blood vessels, catching in this trap the nerves and blood vessels, with considerable symptoms of deep aneurysm. This of course was in the neck and it would be considered pathology of the neck I am sure. This patient had suffered intensely for years; her pain was increasing with no relief from anything. The rib was removed and the nerves released and the circulation reëstablished. This was done seven or eight years ago and she was perfectly well the last I heard from her.

There is one thing I want to mention—the blocking of the salivary duct which gives considerable swelling of the jaw. I had one which we thought a submaxillary abscess. In some way it ruptured and there was actually in this gland a piece of wood fiber—a piece of match or toothpick which had become imbedded in the gland and caused the swelling.

There are lots of things we can look for in the structures of the neck and lots we might overlook.

Lymphopathia Venerea*

SULFASUXIDINE AND FUADIN AS ADJUNCTS IN THE THERAPY OF RECTAL STRICTURE

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SYNONYMS — Lymphopathia inguinale, lymphogranuloma inguinale, lymphogranuloma venereum, venereal lymphogranuloma, and a host of less well-known names.

DEFINITION—Lymphopathia venerea, an infectious disease usually of venereal origin, is caused by a filterable virus, and is characterized by a specific reaction to the Frei antigen together with blockage of the lymphatics and its sequelae.

HISTORY—In 1913 Durand, Nicholas and Favre gave the first detailed account of this disease as a separate entity. In the same year Heiner reported eighteen cases of the new disease. From 1913 to 1930 little interest was shown in the disease, but since that time there have been many reports of diligent and fruitful work.

ETIOLOGY — Lymphopathia venerea is caused by a filterable virus. It is believed by those who are making a study of this virus that either two types exist, or that one virus is of a double-acting nature. Although not yet identified, many of its characteristics are known. The virus may be passed readily from man to man, man to animal, and animal to man. The best animals for use in the study of the virus are white mice, guinea pigs and monkeys. The cornea of rabbits and chick embryo form favorable culture media.

Antigens prepared from the pus of a bubo, mouse brain emulsion or chick embryo are used for the Frei test.

INCIDENCE—The disease occurs much more frequently in the Negro than in any other race. It occurs during the age of greatest sexual activity and is transmitted principally by coitus. Males and females are about equally infected.

PATHOLOGY—The initial lesion is a sore, usually insignificant, which appears three days to three weeks after exposure, then disappears in five to ten days. The infectious process involves the lymphatics and is chiefly lymphatic in spread. However, the disease may spread through the blood stream, by contiguity of tissue, and by the drainage of infected material over healthy tissue.

If one will only remember the anatomy of the genitals, especially the lymph drainage, it can be readily seen that in the male, with the initial lesion usually on the penis, the spread is to the inguinal glands usually. There is adenitis, suppuration, and rupture of the abscess with the formation of sinuses. At first there is a thick, creamy yellow pus which later becomes sanguinous. In the chronic stage there is marked lymphostasis with elephantiasis of the penis and scrotum. The success which has attended the use of the sulfonamides in these cases points toward the probability of secondary infection as a big factor in the development of the elephantiasis.

In the female the usual sites of infection are the fourchette, vaginal vault and cervix. From these sites the infection spreads usually to the lymphatics which surround the rectum. As the process becomes chronic there is involvement of the intermural and intramural rectal lymphatics. Attempts at healing produce fibrous tissue and lymphostasis which interfere with nutrition, and which in turn produce more fibrous tissue and lymphostasis. The continuation of this cycle of events causes a narrowing of the rectal lumen and interferes with nutrition to such an extent that ulcerations form inside the rectum. Efforts at repair of the ulcer, together with the above cycle, produce more of the same. This causes the walls of the rectum to become dense, inelastic, and friable. As the infection continues an organic stricture is formed, and function of the rectum is interfered with.

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*Read before the Delta Medical Society, Drew, Mississippi, October 1943.

Proximal to the stricture there is a ballooning of the rectum. Ulcers form and themselves become secondarily infected by the pathogenic bacteria in the rectum. Papilloma are common. As the infection extends abscesses form about the rectum. These abscesses in turn rupture to the outside or are opened and fistulous tracts develop. These tracts may extend to the vagina, bladder or urethra. Distal to the stricture the mucosa is dull gray and tough. Here ulceration is less common and generally there are no ulcers at the stricture. At the mucocutaneous border and in all areas where there are fistulous openings and thickening of the skin, small papillomatous vegetations occur. Anal skin tags are common.

This picture may be reversed when there is infection of the mucosa as may occur in sexual perverts, or by infection from material draining over the anus from lesions on the fourchette or the vulva. In these cases the erosions and ulcers of the mucosa occur first with extension to the rectal wall and perirectal tissues coming later. The eventual results are the same.

It hardly needs mentioning that rectal strictures do occur in the male and that the picture described above for the male may occur in the female, especially when the initial lesion is on the anterior external genitals.

Systemic changes occurring in this disease are the same as in any chronic debilitating disease. There is a decrease in serum proteins, anemia, and loss of weight.

Lymphogranulomatous lesions have been described in almost every organ of the body.

SIGNS AND SYMPTOMS—The first indication of the disease is the primary lesion. This disappears after five to ten days and the peri-lymphadenitis with its signs of infection, chills, fever and night sweats develops. Then in the male, usually, and in the female occasionally, the inguinal lymphadenitis develops with its eventual fistula formation. In those cases which develop stricture of the rectum there is gradual development of constipation, causing the patient to resort more and more to the use of laxatives. There is a constant foul purulent or sanguinopurulent discharge. Then the fistulae, elephantiasis, and papillomatous vegetations occur. There are leucocytosis, relative mononeucleosis and eosinophilia. And as the disease process continues the patient begins to complain of general debility, asthenia and loss of weight.

DIAGNOSIS—The history of an insignificant genital sore of short duration followed by systematic signs of infection and an inguinal bubo is very suggestive. So in the case with symptoms of a gradually narrowing rectal lumen.

The Frei test is about as accurate in lymphopathia venerea as the Wassermann is in syphilis, and is far easier to perform. One-tenth cubic centimeter of the antigen is injected into the skin of the forearm. A similar injection of a control material is injected into the skin of the other forearm. After forty-eight to seventy-two hours the arms are inspected. A hard red wheal of one centimeter or greater, occurring on the arm into which the antigen was injected is diagnostic of the disease in almost 100 per cent of the cases.

TREATMENT—The number of methods of treatment described attest to our lack of knowledge of this disease. The success ascribed to each method by its proponents, which we cannot afford to overlook would tend to point to the fact that secondary infection plays a large role, and that with control of the secondary infection there is a marked improvement in any case. Almost any treatment of the primary sore will be successful, since most heal spontaneously in one to two weeks. The treatment of bubos is best of a conservative nature also, since most heal spontaneously. In case suppuration has already occurred, aspiration is to be preferred to incision since the likelihood of fistula formation is less.

Rectal stricture causes more disability and is harder to treat than all the other complications. Laxatives and petrolatum will relieve the constipation temporarily. There are many preparations which when applied to the ulcerations will cause improvement, but none of them influence the stricture. Non-specific supportive treatment is indicated in all cases. The Frei antigen has been used successfully by some in the acute cases but has been disappointing in the more chronic forms. Another objection to the use of the antigen in treatment is the likelihood of ulcer formation at the site of injection.

Chemotherapy presents a most confusing array of drugs from which to select. Almost every preparation has been successful in the hands of its proponents and disappointing in the hands of others. Out of the long list of successfully used drugs the sulfonamides are the only ones which have enjoyed any amount of success in the hands of all. With all the sulfonamides there has been a marked reduction of the symptoms due to rectal stricture, elephantiasis and drainage from fistulae.

Anthiomalin and fuadin, both antimony compounds, have been reported used, but with little success.

During the past fifteen months I have had the opportunity of observing, for various periods of time, six patients who have rectal stricture and a positive Frei test.

REPORT OF CASES

Case one is a thirty-two-year-old negress seen first on July 27, 1942. At that time she had pyelitis, a venereal sore involving the entire perineum, and a rectal stricture of such small caliber that the little finger could not be passed into the rectum. The Frei test was positive. The sore was of sixteen years' duration and the patient had been an invalid for eight years. Sulfathiazole, grains 15 four times daily, was given for the pyelitis. Upon recovery of the patient from the pyelitis she was started on fuadin. Fuadin was selected because it was felt that despite the positive Frei test the sore was due to granuloma inguinale rather than to the lymphopathia venereum. The fuadin was given three times weekly; 1½ cc. intramuscularly at the first injection, 3 cc. at the second, and 5 cc. at each successive dose. After a total of nine doses the patient was given two weeks' rest. She received three such courses of the fuadin before the granuloma was healed. At the completion of the first course of fuadin it was noticed that the stricture was relatively soft and that dilatation was not too painful. Dilatations were performed in the office three times weekly simply because it was convenient to do a dilatation before giving the injection. By the end of the third course of injections the stricture was large enough to admit a 25 mm. bougie. She has continued to take the fuadin at regular intervals to prevent recurrence of the granuloma and dilatations to prevent reduction in size of the stricture. Today she is well and has worked in the field as regularly as any member of her family, something she had not done in many years.

Case two is a thirty-year-old negress seen first in September 1942. At that time she had a large fistulous tract with several openings involving the entire left gluteal region, hypertrophy of the left labia with papillomata, and a rectal stricture which would not admit a size 18 F catheter. The Frei test was positive. The patient was given full therapeutic doses of sulfathiazole and was started on fuadin as given above.Her stricture was about one inch in length and dilatations were much slower. This patient soon developed nausea when she took any of the sulfonamides with which I was familiar. Late in October 1942 my attention was called to the relatively new sulfonamide, sulfasuxidine, and I decided to give it a try. She was able to take this preparation and was given several courses of twenty-two grains four times daily before she finally developed a sensitivity to it. By January 1943 the stricture was large enough to admit the index finger and a fistulectomy was done. This patient also developed a sensitivity to the fuadin, evidenced by nausea and aches and pains after the injections. So her recovery has been slow. Today she is apparently well. She still has elephantiasis of the vulva and a slight stricture of the rectum. I believe we can call her cured though.

Case three is a twenty-seven-year-old negress seen first in November 1942. She was complaining of constipation and a sanguinopurulent rectal discharge. She had an annular stricture which would not admit the little finger. The Frei test was positive. She was placed on fuadin and sulfasuxide from the first. Her constipation and the rectal discharge were controlled readily. Dilatation was rapid and the improvement in general health more rapid. Today she still has mucosal ulcers and the stricture will admit a 25 mm. bougie.

Case four is a forty-four-year-old negress first seen in December. She also was complaining of constipation and a sanguinopurulent rectal discharge. She had a stricture which would not admit an 18 F catheter. The stricture was about 1¼ to 1½ inches in length. There was mild general debility. She was started on fuadin and sulfasuxide as the others, but due to her failure to coöperate as the others have her stricture will only admit the little finger and she still has considerable ulcerations. However, her general condition is much improved and she is able to work every day.

Case five is a forty-year-old negress seen first in January 1943. She was complaining of abdominal pain, constipation, and the typical rectal discharge. The Frei test was positive. She was placed on fuadin and sulfasuxidine with immediate relief of symptoms. She received one course of sulfasuxidine and nine injections of fuadin. She then discontinued treatment. When last examined the stricture would admit only the tip of the little finger.

Case six is a thirty-five-year-old Negro seen first in April 1943. He was complaining of constipation, pains in the rectum, and the typical discharge. He had a stricture which admitted the little finger easily. The Frei test and Wassermann were both positive. He was started on fuadin and sulfasuxidine and referred to the venereal disease clinic for antiluetic therapy. He returned for only three injections and stated that he was completely relieved of symptoms. He has not returned, but I have been told that he went elsewhere and was cured in one week. I doubt the cure.

I have records on eight other patients with positive Frei tests. Three negro males had bubos which healed without complications when given sulfathiazole. The others are symptom- and sign-free.

SUMMARY

Lymphopathia venerea is a well established disease entity. The etiology and pathology together with the accompanying signs and symptoms are well known. At the present time the treatment is still far from ideal. Of all the drugs proposed the sulfonamides have proved more universally effective than any of the others.

Based on the results obtained in the above cases I would like to propose a therapeutic regimen for the control of rectal stricture due to this disease. I do not yet claim a cure. This regimen should consist of the administration of fuadin and sulfasuxidine and frequent careful dilatation of the stricture. General supportive measures and other necessary treatments should also be given. This regimen will, if persisted in, obviate the necessity of surgery in many cases, I believe.

The fuadin should be given in courses of nine injections, one three times weekly. There should be rest periods of at least two weeks between successive courses. Not more than three such courses should be given without a prolonged rest period. The too frequent administration of this drug is apt to precipitate "antimony arthritis," nausea, and general malaise. Edema of the feet and legs may occur with its use.

Sulfasuxidine is administered orally. The maximum dosage is one-fourth gram for each kilogram of body weight in twenty-four hours. One half the calculated dosage is given in the first two doses. After the control of symptoms of stricture the dosage may be still further reduced. In fact, I have found that in some of the cases symptoms will be relieved on a dosage of twenty-two grains three times daily. My choice of sulfasuxidine is based on the fact that it is practically not absorbed from the intestinal tract and thus less likely to cause toxic reactions.

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Someone has said that the reason there were fewer wrecks in the old horse and buggy days was because the driver did not depend wholly on his own intelligence.

The Mississippi Doctor

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We wish to congratulate Oxford and the University on having Dr. Morris Fishbein for four fine lectures in January. To Rotary and the other service clubs belongs the initiative we believe. The North Mississippi Medical Society secured him for its afternoon meeting and the banquet, and then the University Forum had him for a large lay audience. Four addresses in just a few hours seemed to be no effort for Dr. Fishbein. There was but little overlapping in the addresses. They were brimful of most interesting facts and activated with wit and wisdom, humor and his nipping sarcasm, that kept the risorius muscle tense the entire time. Medical education, medical economics, public health, and medical legislation all came in for consideration in his informative and inspiring addresses.

Dr. Fishbein is liberally educated and his experiences have been broad. His mind seems to be open to the truth. We believe he is seeing the problem of rural medicine differently from what he has in the past. He is editor of too many magazines and journals to mention, but we believe that through *Hygeia* he is doing his greatest work perhaps and through it lies his biggest field of service in the future. We greatly enjoyed the two addresses we heard. We were delighted to have him visit our state, our university, our fine little city of Oxford. He is a master of facts and a colonel of high rank in the expert and facile use of the English language.

§

If high schools and junior colleges can be affiliated with the senior colleges and universities to good advantage, then our small hospitals can be affiliated with a large university hospital to good advantage. This is common sense. Big hospitals and big schools in big cities are not necessarily the best. The spirit behind the hospital or the school and within the soul of the doctors determines this.

§

Birmingham we understand has provided for four blocks well located in the city for a medical center for Alabama's four-year medical school. We predict that our sister state is going to have one of the very best medical schools in the nation. The vision of Birmingham should stimulate our state capital to action.

§

Our armed forces are receiving the very best medical care ever administered by the medical profession. The general practitioner plan is followed in a large measure it seems. The medic seeks to learn all about the soldier in every way and then meets his needs by utilizing the skills of the specialist, the laboratory man, the social worker, et al. This excellent plan is like we might have in Mississippi in civil life.

The annual meeting of the Southern Medical has so far not been interrupted and each wartime meeting has been a success. Unless conditions are most unusual we think this great association should continue with its annual meeting. It is not good economy to freeze the latest in medicine nor to ration it. At any rate it is too early to say that the Southern will not meet next fall. We think it was wise for our state association to continue to hold its meetings. The Mid-South would have done well to have streamlined its program and met for two days and nights, in our opinion.

§

News and Comment

PHYSICIANS NEEDED

The serious need for physicians in the U. S. Naval Reserve is emphasized in recent communications from the Bureau of Naval Personnel of the Navy Department.

Since the Army discontinued the commissioning of physicians, it was anticipated that the procurement of physicians by the Navy would be increased. Actually the number of physicians commissioned in the U. S Naval Reserve has been decreasing. Three thousand physicians are needed as soon as possible to ease the emergency which now exists. Even this number will not actually satisfy the demand.

This state of Mississippi has already contributed more than its share of physicians to the various services, but it is necessary to secure every physician who is not absolutely essential to the health and welfare of our state and who can be spared now.

Many physical defects may be waived for commission in the U. S. Naval Medical Corps Reserve .This is being done in order to help fill the urgent need for medical officers. The age limit is now 55. Doctors up to the age of 60 may apply for commission and be assigned to the U. S. Veterans Administration. Rank is based on both age and experience.

Any applicant should consult the state chairman of Procurement and Assignment Service for physicians, Dr. J. P. Wall, Jackson, Mississippi, regarding his possible release, and then contact the director of Naval Officer Procurement, 11 Gravier St., New Orleans, Louisiana.

DR. UNDERWOOD HONORED

Dr. John MacLeod, of the Department of Anatomy, Cornell University Medical College, and Dr. Felix J. Underwood, executive officer of the Mississippi State Board of Health received the 1944 awards of the Albert and Mary Lasker Foundation.

Presented at the twenty-fourth annual dinner meeting of the Planned Parenthood Federation of America, the awards were $500 in cash, along with a plaque and a scroll, to each of the men. The presentations were made by Dr. Richard Pierson, New York obstetrician, chairman of the federation's medical committee.

Dr. MacLeod was cited "in appreciation of his years of basic research on the physiology of human fertility."

The award was given to Dr. Underwood in recognition of his state's expanded health program "including planned parenthood services as an integral part of the public health program of the state of Mississippi."

SALUTE TO DR. DABNEY

The following from the *Birmingham Age-Herald* is of interest to members of the Southern Medical Association:

> "In the January issue of The Southern Medical Journal a leading editorial, written by Birmingham's Dr. Seale Harris, salutes the new president of the Southern Medical Association—Birmingham's Dr. Marye Yeamans Dabney. It is a salute in which many here, in many walks and ways, will join. Dr. Dabney has endeared himself to his fellow citizens as a very great human being and citizen, as well as a man of top attainment in his profession."

TRI-COUNTY OFFICERS

The Tri-County Medical Society held its annual meeting in Brookhaven in December, with the following election of new officers: Dr. Thomas Burk of Hazlehurst, reëlected president; Dr. T. F. McDonnell of Hazlehurst, vice-president from Copiah County; Dr. E. E. Busby of Brookhaven, vice-president from Lincoln County; and Dr. R. B. Zeller of Hazlehurst, secretary-treasurer.

The next meeting of the society will be held in Brookhaven in March.

DeSOTO COUNTY ELECTS

The officers of the DeSoto County Medical Society for 1945 are as follows: President, C. W. Emerson of Hernando; vice-president, J. M. Wright of Hernando; secretary-treasurer-editor, L. L. Minor, Route 4, Memphis Tennessee; censors, D. C. Funderburk of Olive Branch, A. V. Richmond of Lake Cormorant, and O. C. Brewer of Robinsonville, Miss.

Dr. Henry Manley Wadsworth of Hernando is visiting home after a two years' stay in the Southwest Pacific. He, captain in the Medical Corps, looks every inch the competent soldier doctor and gentleman that he is.

STATE MEDICAL EXAMINATION

The Mississippi State Board of Health will hold medical examinations on Friday, February 9, 1945, in Jackson, Mississippi, at the Robert E. Lee Hotel. Examinations will be given on the first two years only.

For application blank and other information write to Dr. R. N. Whitfield, Assistant Secretary, Mississippi State Board of Health Jackson 113, Mississippi.

REFRESHER COURSE IN OTOLARYNGOLOGY

The fifth semi-annual refresher course in laryngology, rhinology and otology will be conducted by the University of Illinois, College of Medicine at the College in Chicago March 26 to 31 inclusive, 1945. As the registration is limited to thirty, applications will be considered in the order in which they are received. The fee is $50.00. When writing for applications please give details concerning school and year of graduation, and past training and experience.

Address Dr. A.R. Hollender, Chairman, Refresher Course Committee, Department of Otolaryngology, University of Illinois, College of Medicine 1853 West Polk Street, Chicago 12, Illinois.

GENERAL ROTATING INTERNSHIP

House staff appointments to fill twelve places on the general rotating service, Hospital for Joint Diseases, eight interns to begin July 1, 1945; August 1, 1945; September 1, 1945; October 1, 1945, are available for nine months' internship. One half of the number appointed may be permitted to continue for another nine months as junior residents, and thereafter, one half of the number of junior residents may continue for another nine months as senior residents, in accordance with the Allocation Plan of the Procurement and Assignment Service.

The Hospital provides maintenance, uniforms, and a stipend of $25.00 a month.

The Hospital is approved by the American Medical Association for general internships and residencies, and by the American College of Surgeons as meeting its standards.

Applications should be addressed to: Director, Hospital for Joint Diseases, 1919 Madison Avenue, New York 35, N. Y.

OPHTHALMOLOGY SEMINAR

Emory University will sponsor an ophthalmological seminar honoring the memory of Dr. Abner Wellborn Calhoun, M.D., LL.D., first professor of ophthalmology of Emory University and a pioneer in Southern ophthalmology. The program will begin on April 19 and go through April 21, 1945. All those interested in ophthalmology are invited to attend as guests of Emory University.

The guest speakers for that period will be Dr. W. L. Benedict, Dr. John Dunnington, Dr. Harry Gradle, Dr. Parker Heath, Dr. Walter I. Lillie, Colonel Derrick Vail and Dr. Frank Walsh.

ANNOUNCEMENTS

The Vicksburg Hospital, Inc., and the Vicksburg Clinic announce the association of Dr. James Walter O'Dell, formerly of Henry Ford Hospital, Detroit, Michigan, Department of Surgery.

The board of trustees of Meharry Medical College announces the appointment of Dr. M. Don Clawson, as president of Meharry Medical College, succeeding Dr. Edward L. Turner.

The board of trustees also announces the appointment of Dr. Murray C. Brown as director of medical education.

Dr. J. T. Doster takes pleasure in announcing the opening of a department of pediatrics at the Doster Hospital in Columbus, Mississippi. The department will be under the supervision of Dr. J. L. Rubel who has been on the staff of the Department of Pediatrics, Washington University School of Medicine, for the past three years.

Interpreting Medical Literature

Staff of Review

Dermatology—James G. Thompson, Jackson.

Ear, Nose and Throat—Edley Jones, Vicksburg.

Obstetrics and Gynecology—J. F. Lucas, Greenwood.

Orthopedics—Thomas H. Blake, Jackson.

Pathology and Clinical Pathology—John C. Henthorne, Vicksburg.

Public Health—Felix J. Underwood, Jackson.

Pediatrics—Harvey F. Garrison, Jackson.

Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—W. H. Parsons, Vicksburg.

Urology—Temple Ainsworth, Jackson.

DERMATOLOGY

Archives of Dermatology and Syphilology, Nov. 1944; vol. 50; No. 5.

Textile Dermatitis. J. H. Twiston Davies and A. Neish Barker. Brit. J. Dermat. 56:33 (Feb.) 1944.

The authors report that of 670 admissions to the dermatologic wards of a large military hospital during the first six months of 1943, 110 (16.4 per cent) were for dermatoses proved by patch tests and by the observed effect of resumption of wearing issue clothing to be wholly or partly due to intolerance by the skin of contact with woolen textiles. The patient usually complains of itching but may report on account of infected excoriations on the legs and thighs. The itching is often worse in the daytime, though it is rare for the patient not to attribute his symptoms to contact with blankets. In general terms it may be said that the signs are seen chiefly, as might be expected, in parts exposed to contact with melton, serge or other woolen clothing. Thus in every case the lower extremities are attacked with intensity increasing towards the tops of the boots, and in many of them the forearms also. The cutaneous manifestations encountered in order of frequency are 1) prurigo simulating scabies (58 cases), 2) erythematous dermatitis (49 cases), 3) erythema (26 cases), 4) pruritis (18 cases), 5) eczematoid dermatitis (18 cases), 6) facial eczema (10 cases), 7) circumscribed and diffuse lichenification (8 cases), 8) prurigo simplex (4 cases), 9) urticarial eruption (3 cases), 10) acneform eruption (1 case). Sensitization may occur spontaneously or as the result of friction by garments in association with sweating, but more commonly its onset is determined by some other dermatosis. The supposed determining factor was recorded in only 89 cases. In 54 of these it appears to have been scabies. Arsenical dermatitis accounted for six. A common experience was for a patient discharged after apparently complete recovery from arsenical dermatitis to return a few days later with a weeping eczema of the scrotum. External irritants (seen mainly in quinine pessary dermatitis and therapeutic accidents) were responsible for eight cases and infective dermatitis for ten cases. Treatment consists primarily in removal of the irritant. The patient sleeps between sheets, has a cotton or linen shirt and wears cotton pajamas by day under his hospital blues. Simple remedies such as calamine liniment, are no less efficacious than elaborate ones, with which there is always the danger of additional sensitization. It seemed in this series that lapse of time was most important factor in treatment.

Bluefarb, Chicago.

PEDIATRICS

Fetal Erythroblastosis and Habitual Abortion—Cohn, Theodore D. and Cole, Seymour L.—Amerian Journal of Diseases of Children, 68:28 (July) 1944.

The authors state that: "The concept of erythroblastosis fetalis as a hemolytic familial disease entity has become firmly established . . . according to the present concept of the causation of the disease the fetus inherits the Rh factor from a father with Rh-positive blood. The Rh factor (agglutinogen) passes through an imperfect placental barrier into the Rh-negative blood of the mother. In response to the Rh agglutinogen, anti-Rh agglutinins are produced. These agglutinins pass through the placenta into the fetal blood, where they cause hemolysis of fetal red blood cells and produce the manifestations of erythroblastosis fetalis.

"It is suggested that only Rh-negative blood should be used in the treatment of the disease and that mothers of erythroblastotic infants should not be permitted to nurse their children."

It is said that "it is important to obtain a person with Rh-negative blood as a sperm donor if artificial insemination is contemplated for the mother of an erythroblastotic infant."

It is emphasized that "if premarital cross matching and tests for the Rh factor were performed the occurrence of erythroblastosis fetalis could be foreseen and prevented.

"It is suggested that in all cases of habitual abortion, tests for the Rh factor and its agglutinin should be made."

Case Report—"The patient, a 34-year-old white woman, was married for the first time in 1931, at the age of 23.

"Between 1931 and 1934, she had two spontaneous abortions, one at two months, the other at three months.

"In 1935 she became pregnant again and delivered an eight-month, premature, severely jaundiced infant. A diagnosis of erythroblastosis fetalis was made; the child died in two days. An autopsy revealed a six-week premature infant girl with jaundiced scleras and skin and a distended abdomen. There were small amounts of clear jaundiced fluid in the pleural, pericardial and peritoneal cavities. Microscopically, areas of hemopoietic tissue were found in the liver, pancreas, adrenal glands and lymph nodes. The sternal and tibial marrow was shown to be hyperplastic, with an increase in the erythroid elements. The blood showed severe erythroblastosis.

"The patient was divorced in 1936. In 1938 she remarried. During the interval from 1938 to 1940 she had three pregnancies, in 1938, 1939 and 1940, all of which terminated in spontaneous abortions in the second and third month.

"Still hoping for a viable child, the patient became pregnant once more in 1941. In view of the history of repeated abortions and the premature delivery of an erythroblastotic infant, tests for the Rh factor were performed on the blood of the patient and her second husband.

"The patient's blood was found to be Rh negative; her husband's, Rh positive. While these studies were in progress, the patient took a long train trip, shortly after which she spontaneously aborted a two-month fetus.

"At this time the patient's first husband was traced, and a sample of his blood was obtained for study. It proved to be Rh positive. In the interim he had remarried, and his second marriage was productive of a normal child.

COMMENT

This case report emphasizes the importance of a careful examination of the blood of both father and mother to determine their Rh factor and thus determine the method and procedure as to diagnosis and treatment. Premarital examination and advice to prospective fathers and mothers would seem advisable. However, just at this time there is a lot of research being done on this subject.

Other articles will be appearing soon which will throw new light on this whole subject.

Finding a person with tuberculosis in the minimal stage means a large saving to the individual and to the taxpayer; for such a person may be treated with little or no loss of time. Usually his disease does not become contagious and, therefore, he does not spread it to others. Furthermore, he, himself, does not fall ill, and therefore, does not require a long period of hospitalization.

Treatment and hospitalization is being given without charge to persons with cancer in Saskatchewan since May 1, 1944. The care of the tuberculosis has been on this basis since 1929.

THE LABORATORY AND THE COUNTY HEALTH DEPARTMENT

A. L. GRAY, M.D., Director
Preventable Disease Control

Every physician is vitally interested in the efficiency of the diagnostic laboratory facilities upon which he relies for the effective practice of medicine. The State Hygienic Laboratory has been serving Mississippi since 1910 and its range of activities has extended greatly in the intervening years in order to keep pace with new technics in a rapidly expanding medical science. Accurate laboratory findings, done by approved scientific methods, are of tremendous value to both the physician and health officer in determining the exact conditions with which they are dealing.

It has been said that "the laboratory holds first place as the hub of the wheel of every competent public health organization." It serves all of the divisions of the entire health department as well as the requirements of the medical profession of the state in the detection of disease conditions. It provides accurate data to health departments for control purposes, supplying information on correct methods of applying known facts, renders timely service to everyone and points the way to further progress through public health research.

It is fully understood that a county health department program cannot be effective without good laboratory service. A health department staff trying to conduct a program without dependable laboratory service is comparable to a large bomber flying at high altitude and dropping its destructive load without the aid of a bomb sight, missing the target more often than scoring. In the county health department, good laboratory service is the bomb sight which permits directing efforts of the staff so that the very best results can be obtained with a minimum loss of ammunition. Such laboratory service is comparable to the bomb sight in another way in that it is complicated, requiring very specialized training and knowledge by those who render the service. Making further analogy, the bomb sight can only serve the people through the plane and its crew—the county health department staff and private physicians. The fullest coöperation of all is necessary to achieving the results desired.

Laboratory services are indirect services through private physicians and health departments to the people, individually or collectively. In so far as the county health department is concerned, these services are practically all for the purpose of aiding in diagnosis, guiding in treatment, control of the environment to protect against disease hazards, and the manufacture of certain protective agents. These services are geared to serve the first and foremost function of any health department—the control of communicable diseases.

It is not within the province of the laboratory to make diagnoses or interpret the findings to the health department. It is unfair to the director of the laboratory and his staff to expect them to do more than make a careful study of specimens submitted and to report accurately the findings. At the same time it would not be reasonable for the laboratory staff to expect the health department to submit all specimens at exactly two o'clock on the first Tuesday of each month in a box two inches square, blue on top and red on the bottom. No one has a right to be critical of the laboratory for failure to find gonococci in a thick fibrous mass of a mucoid cervical plug roughly smeared on a dirty piece of glass, even though the specimen may have been taken from a clinical case of gonorrhea. It goes without question that there must be a spirit of compromise and understanding on the part of those who render the service and of those who receive the service, with full allowances being made for limitations. Should the health officer not get what he has reason

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Presented before the Mississippi Public Health Association, Jackson, Miss., December 8, 1944.

to expect from the laboratory, he should feel free to discuss his problems with the laboratory director, who in turn will welcome the opportunity to find out just what the problems are so that everything possible can be done to effect a solution. Should the trouble lie in the failure of those who send in specimens to prepare them properly, the laboratory director should not hesitate to point out these deficiencies and be explicit in his directions of what is required.

The writer has seen enough of laboratory service to be mindful of many of the technical difficulties involved in rendering it. Under the most favorable conditions, the laboratory has a difficult job because of the very nature of its work. We have all been inclined to expect too much of the laboratory because of our own ignorance of the limitations involved. Can one imagine anything more discouraging to a scientific worker who, by her nature and training, is inclined to precision and neatness, than to be confronted with a crushed carton filled with a homogeneous mass of bloody fecal-smeared data slips and bottles and who is expected to isolate typhoid bacilli from the remaining feces which failed to leak out and determine the Wassermann titre on the blood specimens. With all the skill and equipment in the world, one could not routinely find what one is sometimes expected to find in some of the specimens coming to the laboratory.

All of this adds up to the fact that to serve the best interest of everyone, there must be mutual understanding of the problems involved. Without good laboratory service properly used by the county health department, the public health program is certain to suffer. The county health department must lean heavily upon laboratory service and this makes it absolutely necessary that every precaution be taken to achieve accurate and dependable results.

Let us consider, briefly, some of the more important laboratory aids to a county health department, particularly with reference to the use and interpretation of laboratory findings.

Blood cultures and agglutinations: These are among the most useful of laboratory procedures in the diagnosis of certain communicable diseases. Culture and agglutination for typhoid fever, and agglutination for typhus fever, undulant fever, tularemia, and Rocky Mountain spotted fever, are essential in diagnosing this group of diseases because of similarity of symptoms. When a reputable laboratory reports the isolation of typhoid bacilli from a specimen of blood from a sick patient, it means that the patient has typhoid fever. Typhoid bacilli do not invade the blood stream under any other conditions and all such cases should be reported as typhoid fever. On the other hand, a positive typhoid agglutination may mean one of many things. It may mean that the individual is a carrier or that he had typhoid fever several years previously. Its most common meaning is that the patient received typhoid vaccine in the past few years. In addition, it is a frequent occurrence for temporary contact intestinal carriers to develop agglutinins in the blood. In an area like Mississippi, which has had a high incidence of typhoid fever and where 50 per cent of the population has had typhoid inoculation, a positive agglutination means little except when repeated tests show an increasing titre or the original test shows a titre of 1 to 600 or higher.

Patients having symptoms indicating a blood culture may have any of the infections mentioned above. For this reason the State Hygienic Laboratory does routine agglutinations for typhoid, typhus, undulant fever, tularemia and Rocky Mountain spotted fever. It is only through such laboratory procedure that many cases of these diseases are ever diagnosed because of the low index of suspicion in the minds of most physicians. In general, an agglutination of **Proteus X-19** in a titre of 1:80 on one test or in an increasing titre means either typhus or Rocky Mountain spotted fever. Undulant fever agglutination in a titre of 1 to 80 or above or a lower increasing titre on successive tests in most cases means undulant fever. The same applies to tularemia agglutination.

Malaria smears when reported positive for parasites can usually be regarded as such, but one negative smear means relatively little. It may, of course, mean that the individual does not have malaria. On the other hand, the slide may have been prepared at a time when the parasites were fewest in the peripheral blood, thereby making it very difficult to find the parasite. Again it may mean that the technician gave up in desperation after trying to stain properly and examine a smear too thick or too thin to permit satisfactory examination.

Many opportunities for stopping the

growth of a chain of gonorrheal infections have been missed in recent months in this state because the laboratory reported smears negative. Where there is epidemiologic and clinical evidence of gonorrhea the individual should be treated as gonorrheal regardless of findings on the smear. The best of technicians can only find the gonococcus in smears properly prepared in 30 to 50 per cent of known cases with only one smear. With smears not properly prepared and examined by a technician inadequately trained the findings will be practically nil. Repeated smears will increase the percentage of positives.

Negative findings in a specimen of sputum examined for tubercle bacilli may indicate that there are no bacilli present. Again it may have meant, and frequently does mean, that saliva has been examined rather than secretions from the lungs where tubercle bacilli would be present in sufficient numbers to find them. Repeated specimens tremendously enhance the chance of finding the bacilli.

It is probable that the laboratory diagnostic aids for diphtheria have been more misunderstood than most other procedures. This has been primarily in the way of interpretation of positive and negative reports. Failure to find diphtheria bacilli in a clinical case of diphtheria either by direct smear or culture is not sufficient grounds for diagnosing the case as not being diphtheria. Negative smears and cultures are frequent in cases with clinical diphtheria which respond therapeutically as diphtheria. If the culture is taken by gentle swabbing of the surface of the membrane, the results will frequently be negative. It is in the doubtful cases with a positive culture or smear that this result is most significant. A clinical case of diphtheria should be carried as such unless laboratory or other diagnostic aids other than a negative diphtheria culture point to streptococcic, Vincent's or other types of infection. On the other hand, a positive diphtheria culture or smear frequently has varied meanings. An individual with clinical signs of nose and throat inflammation, with a positive culture and in the absence of other causes for the inflammation, should be classified as having diphtheria regardless of severity of symptoms. This is particularly true in family and other contacts of frank cases of diphtheria. Positive cultures in contacts or other individuals without signs and symptoms should be classed and handled as carriers and not as cases. Incidentally, it is not desirable for diphtheria carriers to be reported to the State Board of Health.

It is all-important that the health officer and physician understand the full meaning of the various findings upon stool culture as it will enable them to cope better with conditions indicated and institute proper treatment and control measures. An abbreviated classification of organisms most commonly reported from stool culture is in order and these are in four groups: (1) *B. typhosus;* (2) *Salmonella* composed of *Paratyphoid A and B;* (3) *Shigella* or dysentery group such as *Shiga, Flexner, Schmitz, Newcastle, sonnei, dispar, alkalescens, and* 8524; (4) *Proteus* group—represented by *B. morgani.*

Typhoid or paratyphoid bacilli A and B found in the stool with symptoms of gastro-intestinal disease ordinarily means that the case in question is suffering at the time from typhoid or paratyphoid fever. Here it should be kept in mind that these diseases may range in severity from mild indisposition of two or three days to the severest. On the other hand, when these organisms are found in the stools of food handlers with no recent history of illness, it ordinarily means a permanent carrier state when confirmed by a second positive. Close contacts of cases frequently develop a temporary carrier state and recovered cases may harbor the organisms for several months as convalescent carriers. In no instance should either of these be permitted to handle food for the public; and excreta disposal and immunization should be carefully looked after.

The *Shigella* or dysentery group will be found frequently in the stool of those having gastro-enteritis. A large percentage of all such upsets is due to this group. *Shiga, Flexner, Schmidtz, Newcastle, sonnei,* and 8524 are all dysenteric organisms and the public health response should be the same in all. Control involves extreme care in personal, home, and community hygiene and sanitation. Explosive outbreaks are usually the result of food, water, or milk contamination and require close attention of the health department, for such outbreaks are serious of themselves and may be the forerunner of a typhoid outbreak. When a few cases come to the attention of a health officer, he should seek further information from physicians and other sources as to the probable extent and source of infection. We are having many more outbreaks in Mississippi than are being discovered. Several cases of severe nausea and vomiting, or profuse diarrhea occurring simultaneously in a community, deserve close study of the health officer, nurse, and sanitarian. In this group are also *S. alkalescens* and *S. dispar*, the pathogenicity of which is questionable, but accumulating evidence indicates pathogenicity.

The other group frequently reported upon culture is the *Proteus* group represented primarily by *B. morgani.* Although the pathogenicity of this organism has been questioned, more and more evidence is accumulating showing pathogenicity.

Time will not permit much discussion of serologic reports. We are at a stage in our syphilis control program when quantitative serological studies rather than qualitative will be of much help in diagnosis and treatment. Especially important is the rapidly increasing use of spinal fluid studies for the detection of and guidance in the treatment of neurosyphilis. With a large backlog of neurosyphilis cases on register it is imperative that the best of serologic work on these cases be available. We cannot afford diagnoses of neurosyphilis on the basis of uncertain laboratory technique. It is one thing to have or try to treat uncomplicated syphilis, but quite another to have or try to treat neurosyphilis. Efficiency in spinal fluid serology is so extremely important and there is so much of this work to be done in the future that it is recommended that the State Hygienic Laboratory arrange to have these procedures of our laboratory checked by the National Institute of Health and other laboratories in the same fashion that blood serology has been checked for many years. Quantitative serologic follow-up of cases treated by rapid methods is paramount in the success of this scheme of treatment. For the next few years the accuracy of laboratory work on spinal fluid and blood serology will mean the difference between success and failure of the syphilis control program.

In conclusion, I should like to pay tribute to the spirit of teamwork which has always characterized public health workers and their associates. I know we shall continue to render the greatest possible degree of service of which we are capable, motivated ever by the desire to build constructively for the health of individueverywhere, and for Mississippians in particular.

MISSISSIPPI PUBLIC HEALTH ASSOCIATION

The eighth annual meeting of the Mississippi Public Health Association, held in Jackson, December 7-8, was acclaimed one of the most interesting and helpful meetings in the Association's history. The papers presented were exceedingly timely and covered an array of subjects pertinent to public health. Dr. Ernest Carroll Faust of the Department of Tropical Medicine, Tulane University, addressed the first day's general session giving a paper portraying Certain Public Health Problems in Parasitic Diseases in Mississippi in the postwar era.

Dr. Faust asserted that "the postwar public health problems in parasitic infections in Mississippi are concerned primarily with the same diseases which have existed within the state for many decades; namely, malaria, hookworm infection, amebiasis and bacillary dysentery. In addition, murine typhus is becoming a serious public health problem, bubonic plague is possibly imminent, Rocky Mountain spotted fever may become increasingly important, and dengue and yellow fever are potential hazards. The control of these diseases is well known but deserves restatement.

For malaria better diagnosis and more adequate treatment are required, and , above all, elimination by all known methods of the mosquito transmitter, *Anopheles quadrimaculatus.* For hookworm infection, amebiasis and bacillary dysentery, there must also be more adequate diagnosis and treatment plus continued improvement in the sanitary disposal of human wastes. For murine typhus and the potential danger of plague, there must be extinction of domestic rats. For safety against dengue and yellow fever, a reduction of the *Aedes aegypti* index below the maximum safety breeding level is required." Putting these control measures completely to work will not only bring health dividends in proportion to the effort, Dr. Faust pointed out, but will make it possible largely to ignore the potential dangers of importation of exotic infections in returning troops, with the knowledge that the safeguards for endemic diseases will constitute barriers against which the more common exotic diseases will have no appreciable effect.

Other out-of-state speakers on the program included Dr. Alvin E. Keller, associate professor of Preventive Medicine and Public Health, Vanderbilt University, who spoke on

"Recent Advances in the Control of Communicable Diseases;" Mr. H. A. Johnson, senior sanitary engineer, in charge of malaria investigations of the United States Public Health Service, Memphis, who spoke on DDT, the powerful new insecticide; and Mr. Roy J. Boston, engineer, Georgia Department of Public Health who discussed control of murine typhus. Also on the program were Miss Carolina R. Randolph, director of health studies, The Commonwealth Fund, and Miss Aimee Wilcox, associate protozoologist, United States Public Health Service.

Under the efficient administration of Mr. John B. Grant, president, the association has grown to a peak membership of 741, with increasing interest being manifested in all phases of public health. Dr. A. L. Gray, secretary-treasurer, had a large part in planning and arranging the program for the meeting and in looking after the work of the association throughout the year. Dr. C. M. Shipp, health officer in Hancock County, Bay St. Louis, succeeds Mr. Grant as president. The new president-elect is Dr. A. L. Gray, Jackson; and heading the administrative section will be Dr. R. L. Simmons, Meridian.

PREVALENCE OF COMMUNICABLE DISEASES IN MISSISSIPPI

	Nov. 1944	Nov. 1943	Nov.-5 yr. avg.
Acute poliomyelitis	3	4	5.4
Bacillary dysentery	473	443	400.8
Dengue	0	1	1.8
Diphtheria	89	49	64.2
Influenza	4117	7016	4608.2
Measles	96	164	231.4
Meningococcus meningitis	9	12	5.6
Other forms meningitis	2	7	3.2
Pellagra	163	154	218.0
Pneumonia	1051	1455	1179.8
Pulmonary tuberculosis	138	109	105.2
Scarlet fever	87	47	81.2
Smallpox	0	1	.8
Tularemia	3	3	2.3
Typhoid fever	8	15	8.0
Typhus fever	19	17	12.4
Undulant fever	0	2	1.2
Whooping cough	471	777	572.4

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CENTRAL MEDICAL AUXILIARY

Mrs. W. R. Bethea, president, presided over the regular meeting of the Central Medical auxiliary in January at the Red Cross Production rooms on the fairgrounds. A committee was named to investigate whether or not the high schools have copies of *Hygeia* in the libraries, and the auxiliary will furnish subscriptions for schools which do not have this magazine.

Mrs. Laurence Clark of Vicksburg, state president, will be a special guest at the February meeting of the auxiliary.

New patients are being brought to Foster General Hospital, and the auxiliary is urging all doctors' wives to come to the fairgrounds the first and third Tuesdays of the month to make surgical dressings.

Members at this recent meeting were: Mrs. T. M. Moore, Mrs. H. C. Ricks, Mrs. George E. Riley, Mrs. B. N. Walker, Mrs. J. P. Wall, Mrs. Robert B. Price, Mrs. R. C. O'Ferrall, Mrs. H. C. Sheffield and daughter, Miss Martha Frances Sheffield, Mrs. I. C. Huggins, Mrs. Sam F. Parker, Mrs. Adna G. Wilde, Mrs. Peyton Greaves, Mrs. George Adkins, Mrs. Lauch Hughes, Mrs. Lawrence Long, Mrs. G. H. Butler, Mrs. W. H. Hall and Mrs. W. R. Bethea.

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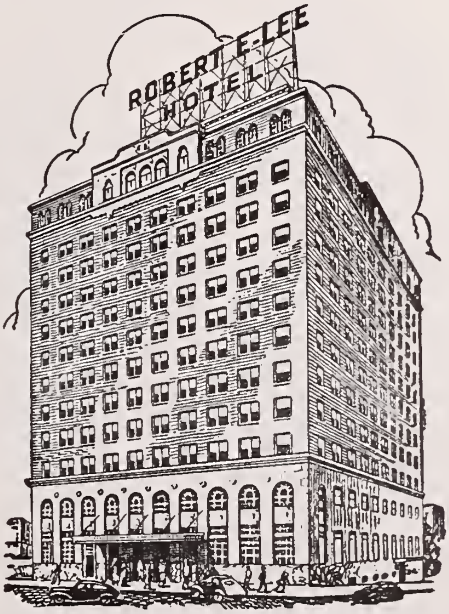

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With aching hands, and bleeding feet
We dig and heap, lay stone on stone;
We bear the burden and the heat
Of the long day, and wish 'twere done.
Not till the hours of light return,
All we have built do we discern.

MATTHEW ARNOLD

B DEFICIENCY IN GROWING CHILDREN

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[1] Kelley, H. T., and Sheppard, M. "A Dietary Study of Subjects from Upper Income Groups," New England Journal of Medicine 228:118-124, 1943.

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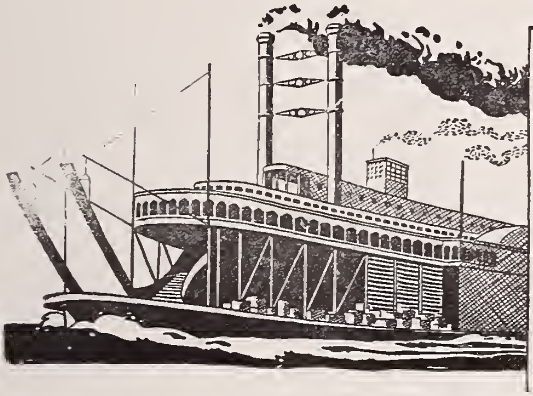

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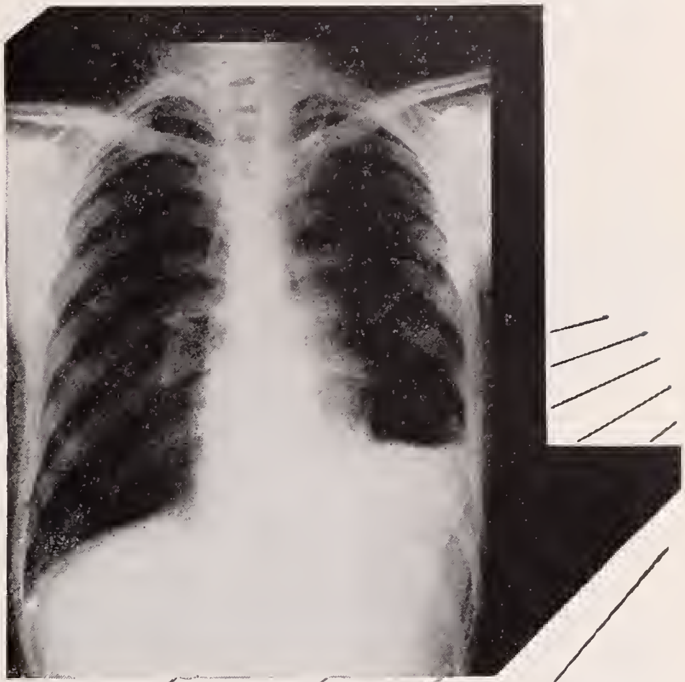

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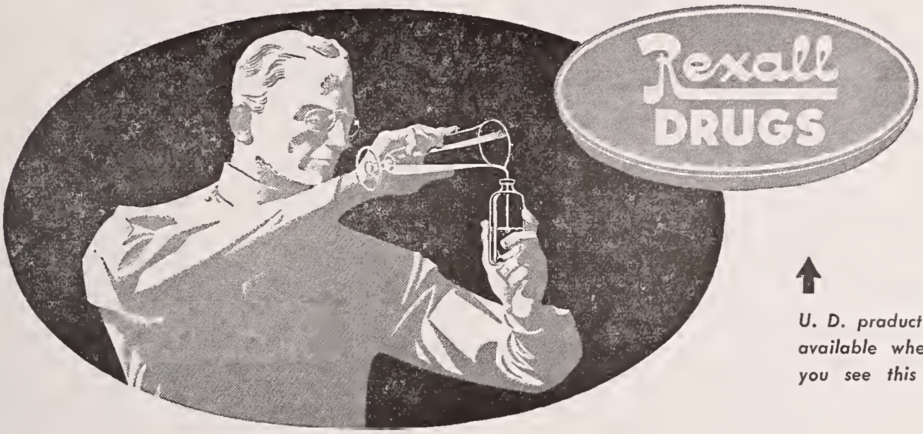

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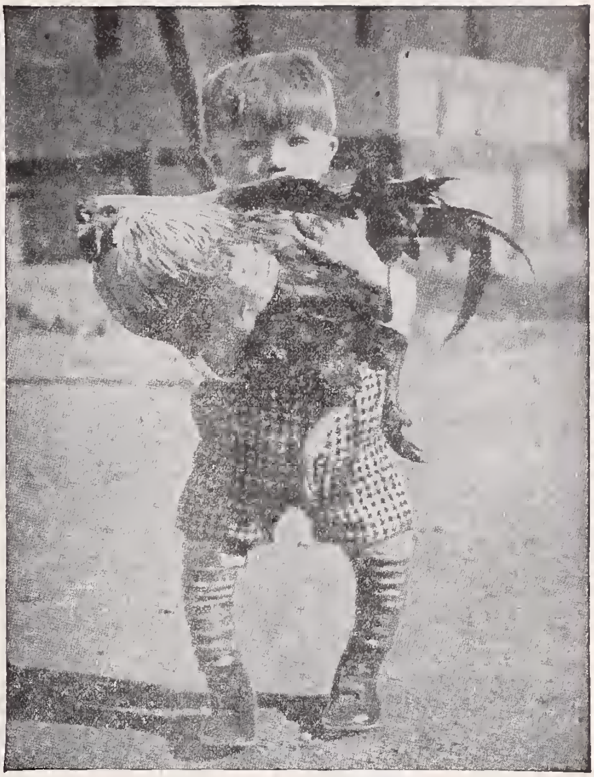

Example of severe rickets in a sunny clime.

LEST WE FORGET—we who are of the vitamin D era—severe rickets is not yet eradicated, and moderate and mild rickets are still prevalent. Here is a white child, supposedly well fed, if judged by weight alone, a farm child apparently living out of doors a good deal. This boy was reared in a state having a latitude between 37° and 42°, where the average amount of fall and winter sunshine is *equal to that in the major portion of the United States.* And yet such stigmata of rickets as *genu varum* and the quadratic head are plain evidence that rickets does occur under these conditions.

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John Wesley, the founder of Methodism, a noted ecclesiastic and a really great Christian character, was the author of a book, *Primitive Physick, or an Easy and Natural Method of Curing Most Diseases*, was first published in 1747. Thirty-six editions of this book were published between 1747 and 1840, fully sufficient evidence of its popularity. Hydrotherapeutic measures were stressed. In an early edition, speaking of electricity, he says it "comes the nearest a universal medicine of any yet known to the world." His observations on scurvy were good. Many of his therapeutic measures would be considered today as queer and fantastic.

He made no effort to supplant the doctor. He states, "In complicated cases, I still advise, let everyone apply without delay to a physician who fears God." In those days it was the custom of clergymen to minister to the body as well as to the soul.

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Recent Advances in the Control of Communicable Diseases*

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COMMUNICABLE DISEASE control is one of the oldest activities in the program of state and local health departments. In any discussion of duties of health officers, communicable disease control and prevention always receives considerable emphasis. While it is difficult to determine what proportion of the budgets of local health departments is utilized for this activity, in most instances, it varies from 10 to 20 per cent, which represents a considerable portion of the funds of the health department.

Marked reductions in morbidity have occurred in a number of diseases since 1900. This is especially true of that group in which adequate facilities have been developed as a result of engineering knowledge in the field of environmental and personal sanitation. In a small number of diseases, morbidity has been reduced by employing agents which are effective in stimulating active immunity. It is not possible at present to prevent illness in a large number of communicable diseases since specific methods of prevention are not available. However, in the past decade many technical advances have been made. If some of these measures should be applied it is probable that (1) there would occur a further reduction in the incidence of certain diseases and a reduction in time required for investigation and diagnosis; (2) other avenues of approach to the control of diseases would be opened for research.

The advances in the following fields will be discussed as they relate to public health and preventive medicine—bacteriology; virus and rickettsial diseases; immunology; sanitation; chemotherapy and antibiotic therapy; public health administration; and public health education.

ADVANCES IN THE FIELD OF BACTERIOLOGY

A. TYPING OF BACTERIA. Pneumococci were the first group of bacteria to be divided into specific fixed types. In the beginning there were four types. These were later expanded into thirty-two and at present seventy-five types have been identified. The importance of typing pneumococci has been generally appreciated. Typing of pneumococci has been a valuable epidemiological instrument in the study of the epidemiology of pneumococcal pneumonia. Prior to the development of the sulfonamides, the treatment of pneumococcal pneumonia with specific type serum depended upon accurate typing of the etiological agent. Since the sulfonamide drugs have been used for treatment, typing has been neglected because a large percentage of the cases of pneumococcal pneumonia responds to this chemical therapy. There still remains a small number of cases in which both the sulfonamides and type specific serum are necessary. Unless typing is done early in the disease, it may be impossible or at least difficult to do so after sulfonamide therapy has been started. Continuation of typing would add a great deal to our knowledge of sulfonamide resistance strains and types.

The grouping of streptococci into those which are pathogenic and non-pathogenic for human beings is of importance. A majority of streptococci pathogenic for human beings fall into the group of beta-hemolytic streptococci. These in turn can be typed. This problem at present is in about the same stage of development as pneumococcal typing was many years ago. This procedure has been employed in epidemiological studies in the military forces and in clinical studies in some of the large hospitals of the country. It may not be practical to introduce typing of streptococci into the communicable disease program at this time, but grouping into pathogenic and non-pathogenic strains could be done.

In 1938 Craigie and Yen demonstrated that it was possible to type various strains of *E. typhosa*. The method of typing is based on certain peculiarities of a strain of bacteriophage which is specific for the Vi form of *E. typhosa*. The bacteriophage exhibits a selective affinity for the strain on which it was propagated. By selective propagation of bacteriophage on various strains of typhoid bacilli it has been possible to divide freshly isolated cultures into a limited number of readily distinguished types. Lazarus has pointed out the possible uses of typing typhoid bacilli. Cases of typhoid fever arising from a carrier will have the same type of organisms as the carrier. The typing of all known carriers in a given area will permit the immediate elimination of some carriers from consideration and the investigation of others when typhoid fever occurs in an area. In an epidemic typing will show the number of different strains of *E. typhosa* responsible for the disease. If all cases show the same type, a carrier is probably responsible. If a wide variety of types is encountered, sewage contamination is probably responsible for the outbreak. Typing studies in a given outbreak will indicate definitely whether all sources of infection have been discovered. Practical application of this procedure has been reported by Lazarus and it may be a valuable measure in epidemiological investigation and control of typhoid fever.

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Phair, Smith and Root have shown that serum secured from chickens injected intravenously with various types of meningococci contain specific agglutinins. The agglutination tests performed with chicken serum require no incubation or storage in an icebox. The reactions occur at room temperature and the test can be read immediately. This work will afford a better means of determining the various groups of meningococci present in a community and it should be of assistance in separating strains and groups of meningococci and differentiating them from other species. Most of the organisms in the Neisseria group of bacteria, except gonococci, may be differentiated by this means.

In the past few years it has been possible to differentiate diphtheria bacilli by cultural methods into gravis and mitis strains. Some investigators have attempted to correlate the severity of clinical diphtheria with the type of strain isolated from the patient. There has been no clear-cut evidence that there is a consistent correlation between the clinical manifestations and the strain of diphtheria organism. It has been demonstrated, however, that gravis strains are more invasive than mitis strains. After infection has been established with gravis strains the organisms proliferate rapidly. This results in the development of a large number of organisms which in turn produce a large amount of toxin. There is no qualitative difference between the diphtheria toxin elaborated by gravis and mitis strains. The difference appears to be a quantitative one and the importance of typing the organisms from this standpoint is to know that one is dealing with the gravis strain and can be prepared to use very large doses of diphtheria antitoxin for the treatment of such conditions. Frobisher suggests that the increase in the prevalence of gravis strains in a community may be used as a guide to the occurrence of a potentially dangerous situation.

B. IMPROVED MEDIA FOR BACTERIOLOGICAL DIAGNOSIS. While it has been possible to use improved methods of diagnosis of *E. typhosa* by means of improved media, this should be mentioned because it was probably the beginning of investigation into the possibilities of improving the media for the diagnosis of other pathogenic organisms causing disease in the intestinal tract. It is now possible by use of improved cultural methods to isolate and identify the Shigella group of organisms which is the etiological agent of bacillary dysentery. This has been a distinct advance in the development of our knowledge of the epidemiology of this group of infectious diseases since we know that the actual clinical cases of dysentery represent only a relatively small number of infections that are present in a community.

Another group of organisms which has been the cause of a great deal of disease in the past has been the Salmonella group which is responsible for a large proportion of the infections acquired through eating contaminated food. As a result of the improvement in the method of bacteriological diagnosis of these organisms we know now that not only animals, which are the reservoir hosts of these bacteria, but human beings also can act as hosts for varying periods of time either as convalescents or carriers.

The bacteriological diagnosis of gonococcal infections has been a problem of great importance which did not receive much emphasis until the past few years. It is now possible to isolate gonococci from patients and this is being done more frequently than heretofore. While the bacteriological diagnosis of gonococcal infections has been improved, the methods are not yet developed to the point where they can be employed in the smallest local health departments. A beginning at least has been made in this particular field and it is possible that through continued effort the procedures can be developed so that it is feasible to use them as an aid in diagnosis in small health departments in rural areas. In any method that might be developed care should be used in differentiating gonococci for other organisms in the Neisseria group.

C. Improved Methods of Diagnosis. Two very important techniques have been described which represent an improvement over the available methods of diagnosis. One is the use of rectal swabs for the diagnosis of enteric infections. This method consists of inserting into the rectum an ordinary cotton-tipped swab and securing a small amount of fecal material. The culture media may be inoculated at the time the swab is secured. This has been made possible by the development of the improved media which has been mentioned above. This, no doubt, will result in the saving of time and money.

Another improved method of diagnosis has been the development of the nasopharyngeal swab for the diagnosis of pertussis. Several investigators have reported better results with the nasopharyngeal swab than they have with the cough-plate method of diagnosis. This offers an opportunity to make an early bacteriological diagnosis of whooping cough, whereas prior to the development of this method the diagnosis was made almost entirely on clinical manifestations. The cough-plate method of diagnosis is a satisfactory one when it is employed in the proper manner and with satisfactory equipment for obtaining the material from the patient. There are many obvious defects, however, in the use of such a procedure for routine use in the field. The development of the nasopharyngeal swab promises to be a distinct advantage in this particular problem.

D. Dissociation of Bacteria. Health agencies and the medical profession are always on the alert for the development of improved antigens which may be useful in the production of agents for effective active immunization. The dissociation of bacteria is a phenomenon which has been known for a long time. However, in the case of *E. typhosa* and *H. pertussis,* the phenomenon of dissociation as it affects the antigenic qualities of these organisms has been emphasized in the last decade. In the case of *E. typhosa,* the Army Medical School has published the most important work in regard to immunization to typhoid fever. This entire field has been explored by that group and their work has emphasized the importance of using smooth organisms which are virulent and which are strains of the Vi antigen. They have found that this type of organism when used in a vaccine offers the best protection possible against typhoid fever.

In the case of *H. pertussis,* it was demonstrated in 1930-31 by Leslie and Gardner that this organism undergoes certain dissociative changes. As these dissociative changes occur, the organisms are classified into four phases, I, II, III, IV. As the organism passes into each successive phase the virulence diminishes. It is now known that phase I organisms represent the state of *H. pertussis* most satisfactory for the production of vaccines which are to be employed as immunizing agents against whooping cough. At present most of the pertussis vaccines contain only phase I organisms.

ADVANCES IN THE FIELD OF VIRUS AND RICKETTSIAL DISEASES

A. Identification of Viruses. In this particular aspect of communicable diseases, great strides have been made in several directions.

1. Cultural Methods. Cultural methods have been developed by which it has been possible to identify certain viruses. The methods which have been most valuable for this purpose have utilized the chorio-allantoic membrane of chick embryos, animal inoculation and tissue cultures. One of the most recent discoveries has been the identification of the virus of epidemic diarrhea of the newborn. This work was reported by Buddingh and Dodd of the Vanderbilt University School of Medicine. It was found that the diarrheal manifestations of the problem were often associated with a stomatitis. The same virus has been isolated from the lesions in the mouth as well as from the intestinal tract of newborn infants. It has also been identified in the secretion of the mouths of adult contacts. Identification of the virus was carried out by inoculation of the cornea of rabbits since it has not been possible to demonstrate the virus by any other cultural method. This will prove, no doubt, to be an important discovery since epidemics of diarrhea in newborns may be associated with a high morbidity and mortality rate.

2. Serological Tests. Another method of identification of viruses has been the development of virus neutralization tests. This procedure has been employed in the past and will be utilized more frequently in the future as a means of identification of the viruses and it

may be employed as an epidemiological procedure to learn more about the incidence of virus diseases in a community.

One very interesting test which may prove of importance in the future in regard to epidemic influenza is the test for inhibition of agglutination of chicken red blood cells.

Hirst has shown that the red blood cells either of an infected chick embryo or normal chicken red blood cells will be agglutinated when mixed with allantoic fluid of a chick embryo with either influenza A or B virus. Apparently this is a reaction which is specific for influenza A or B viruses. The same author has demonstrated that the agglutination test is inhibited in the presence of serum secured from an animal or human recently recovered from epidemic influenza due to one of the above viruses. When the serum agglutination-inhibition test is performed during the acute stage of influenza and two weeks after the onset, it may be used as a diagnostic, epidemiological and immunological test to determine the presence of infection with the virus and the serological response of the patient. This test has practical application and is already being employed in several institutions. The results in serum agglutination-inhibition tests have been found to agree with the results obtained by the mouse protection method for determining serum neutralizing antibodies against influenza A or B viruses.

3. Production of Vaccines. In connection with the investigation of diseases caused by viruses, the cultural methods and the serological tests which are available have aided greatly in determining whether or not the vaccines which have been developed are satisfactory antigenic agents and whether or not it is possible to demonstrate a specific response to the injection of such vaccines. In addition to the vaccines containing viruses which have been proved to be effective, namely, vaccines containing vaccinia and rabies viruses, it is now possible to secure an effective virus against yellow fever and equine encephalomyelitis. Of more immediate concern to us is the development of a vaccine which contains the influenza A and B viruses. A great deal of experimental work has been done with such vaccines and while at the present time it is not possible to state definitely that they are effective in preventing influenza A and B infections, the results are by no means discouraging, and there is a possibility that they may become of practical importance in the future.

Up to the present time state health department laboratories have not provided for diagnostic laboratory tests in the field of virus diseases. I believe, however, that state laboratories have an opportunity for even greater service than they now perform if diagnostic procedures in this particular field of diseases were to be included in the routine laboratory work. The field of virology requires well-trained personnel who should have a thorough knowledge of bacteriological and serological techniques. It is now possible for personnel to be trained for this purpose since there are several centers in the United States in which investigations of virus diseases are receiving a great deal of attention.

B. RICKETTSIAL DISEASES. In the field of rickettsial diseases effective cultural methods have been developed for the propagation of rickettsiae. It has been found that some rickettsiae grow very well in the yolk sac of chick embryos. This particular method has been utilized in the propagation of rickettsiae of epidemic and endemic typhus fever and Rocky Mountain spotted fever. Animal inoculation is utilized also for this purpose and identification of the viruses, but it is not as direct by this method as it is by the propagation in the developing chick embryos.

Serological tests have also been developed whereby accurate identification of rickettsial diseases is now possible. Utilizing the principle of complement fixation and employing specific rickettsiae as antigens, it is possible to obtain specific tests for the three rickettsial diseases, two of which are present in the United States. They are endemic typhus fever and Rocky Mountain spotted fever. The complement fixation tests become positive in rising titers about the tenth day following the onset of the disease and remain positive for a long time after recovery. By utilizing this procedure it is now possible to employ it as an epidemiological measure in studying the prevalence of the disease in any area. The results of this test agree very closely with the Weil-Felix agglutination test in the diagnosis of epidemic and murine typhus fever and it has the advantage of remaining positive for several years rather than months, as in the case of the Weil-Felix reaction. In many state health department laboratories, the complement fixation tests for these diseases are made for diagnosis. The agglutination test employing specific rickettsiae as antigens is in the stage of development and no doubt it will not be long before that type of test may be employed for diagnosis.

One of the great advances in the control of communicable diseases has been the development of a vaccine which utilizes the rickettsiae of epidemic typhus fever as the antigen. This would not have been possible except for the development of a satisfactory method of propagation in the yolk sac of developing chick embryos. At the present time the typhus vaccine which is being used in the military forces contain only the epidemic type of rickettsiae. This has proved to be quite effective in protecting immunized individuals against epidemic typhus fever. However, this vaccine does not protect against murine typhus fever which is the type seen entirely in the southern part of the United States at the present time. Therefore, any proposals which are made to utilize typhus fever vaccine as a means of immunizing against endemic typhus should take this fact into consideration. At present there is no effective vaccine available in which the endemic type of rickettsiae is utilized as the antigen.

In the case of Rocky Mountain spotted fever there has been a satisfactory vaccine which has utilized the spotted fever rickettsiae present in infested ticks. This vaccine has been demonstrated to be of great value in protecting selected groups of individuals who live and work under environmental conditions which expose them to spotted fever. With the demonstration of the Rocky Mountain spotted fever in the other parts of the United States, especially in the eastern and southern areas, it may become necessary to employ vaccination as a measure of control since the control of the environmental factors and the vectors of this disease is almost impossible. Experimentally it has been possible to produce a vaccine containing egg yolk propagated rickettsiae. If this proves to be as satisfactory as the tick propagated rickettsiae vaccine, it will be a step forward since it will require less time to prepare vaccines by the new method.

ADVANCES IN THE FIELD OF IMMUNOLOGY

There have been three important developments in this field which have a definite bearing on public health practice. The principle of employing stimulating or reinforcing doses of antigens as a means of increasing the immunity against certain diseases is not a new discovery. The principle has been known for a long time, but it has recently been emphasized by the workers in the Army Medical School as a result of their investigation on typhoid vaccine and immunization to typhoid fever. That work has clearly demonstrated the effectiveness of reinforcing doses of typhoid vaccine in stimulating very rapidly the protective antibody titer of immunized individuals. Along with this work the principle of utilizing stimulating doses has been employed for diphtheria and tetanus immunizations and I think that it should be employed in the case of whooping cough vaccination.

The practice of administering simultaneous injections of multiple antigens has been receiving a great deal of attention and from an immunological standpoint it has a sound foundation. The body can respond to the injection of a reasonable number of antigen substances injected simultaneously. Apparently just as great antibody response occurs in the case of each antigen when they are injected simultaneously as occurs when they are injected at different times. In some instances the reactions to simultaneous injections of multiple antigens are not any greater than those observed when single antigens are injected. At present multiple antigens consisting of diphtheria and tetanus toxoid are available and in some instances whooping cough vaccine is added to the latter combination. We have always had available triple typhoid vaccine and some reports are available to show that it is possible to inject safely not only the toxoids and whooping cough vaccines, but typhoid along with them.

Since it is possible to stimulate active immunity against tetanus, it is not unreasonable to suggest that health departments begin to consider this procedure as a part of their communicable disease prevention program. It is true that the number of deaths from tetanus in the United States each year is not very great. On the other hand, deaths from accidents of all types represent one of the ten leading causes of death in the United States. Data as to the total number of accidents in the United States are not available, but it is reasonable to state that the number of accidents which require the use of tetanus prophylaxis is very large. Everyone is familiar with the difficulties entailed in the administration of tetanus antitoxin and the possibility for permanent sensitization to foreign protein and serum sickness following its use. Since tetanus toxoid is an effective immunizing agent and since we can now employ safely the principle of reinforcement of immunity when an individual is injured it seems reasonable to suggest that public health agencies should begin to stimulate interest in the prevention of tetanus. This procedure could be advocated as a routine procedure in children and in other groups in the population whose occupation brings them under the risk of accidents which require tetanus prophylaxis. The procedure has now been shown to be an effective one. The reports of the experience in the military forces and war plants bear out this statement.

One of the important developments in the field of immunology has been the demonstration of the effectiveness of whooping cough vaccination. While it is not claimed that this procedure is as efficient as smallpox vaccination or diphtheria immunization, the evidence which has been accumulated by means of field trials and serological tests does indicate that some protection is afforded individuals who receive whooping cough vaccination. Since the prevention of whooping cough depends entirely upon the development of an efficient immunizing agent, it would seem reasonable that this procedure be adopted by health departments and offered to children under three years of age. It is especially important that reinforcing doses be given after the initial series of injections in order that infants and young children might keep their protective antibody titer as high as possible. This practice should be continued until children have reached the age at which mortality rates resulting from complications of this disease are extremely low.

ADVANCES IN THE FIELD OF ENVIRONMENTAL SANITATION

In the field of environmental sanitation several important advances have been made and have been included in the practice of health departments. In some instances, however, certain developments are under experimental observation and will probably be advanced in the future.

A. In the field of control of water supplies, more effective chlorination procedures have been developed. I refer especially to break-point chlorination which represents superchlorination. Under the accepted procedures for chlorination in the past, outbreaks of water-borne gastroenteritis would sometimes occur even though chlorination was practiced. It was found that if sufficient chlorine was added to the water to assure combination with the protein materials and to have a residual amount remaining after this combination has occurred, it is possible to reduce further the occurrences of water-borne diseases from water supplies that are apparently properly chlorinated. After water supplies are superchlorinated in this way, dechlorination may be carried out if necessary.

Apparatus for the chlorination of small water supplies has been greatly improved, particularly the small pump-type feeders for hypochlorite solutions. This makes possible a greater factor of safety for many semi-public supplies. In addition, a great deal of attention has been paid to distribution hazards, especially in regard to plumbing and backsiphonage. These investigations have led to a better control of the water supply in the distribution system. Standards of practice have been revised so that more effective laboratory control, not only of the plant itself, but throughout the distribution system has been included in the supervision of water supplies.

B. In the field of milk control, it should be pointed out that the program conducted by the Bureau of Animal Industry of the Federal Department of Agriculture for the eradication of brucellosis in cattle has been carried forward. In the field of pasteurization the phosphatase test has been developed and put into routine use in many health department and milk-plant laboratories; and equipment for pasteurization of milk supplies has been improved, not only in design, but in the use of stainless steel and other superior types of material.

C. The list of diseases in which rats represent the natural reservoir of infection has grown in the last ten years. The importance of rodent control has been stressed, especially in the southern states in which there has been demonstrated an extension in the distribution of endemic typhus fever. While the ideal of complete rat proofing of buildings should always be held as the permanent control measure in endemic typhus fever, the development of partial rat proofing, so-called vent stoppage, for the control of typhus fever has been shown to be an effective economical substitute for permanent rat proofing.

D. Malaria and other insect-borne diseases have always received a great deal of emphasis in the southern states, but in recent years renewed effort has been carried out to develop new methods of permanent control of mosquitoes. The State Board of Health of Mississippi has, through its Division of Engineering, advanced the methods of permanent malaria control through the paving of ditches and other drains in this state. This work has received wide recognition throughout the country and the ideas and principles developed here have been utilized in other states.

One of the new developments in insect control is the discovery that dichloro-diphenyl-trichloroethane (generally known at DDT) is an effective insecticide and larvicidal agent. This chemical was first utilized for the delousing of individuals in areas where epidemic typhus fever was present. According to available reports, it proved to be very effective in such an epidemic in Naples, Italy. Since that time numerous experiments to determine the efficiency of this agent against other insects have been carried on. Preliminary reports indicate that it shows great promise for mosquito control and for use against the common house fly. In connection with mosquito control phenothiazine has been shown to be effective, especially in the control of *Aedes aegypti* in artificial containers. In the control of mite-borne infections, another chemical, dimethylphthalate, has been used and advocated, especially in areas where mite-borne typhus fever or scrub typhus fever is prevalent. Apparently dimethylphthalate has not been shown to have the high efficiency against this type of insect that DDT has against human lice.

E. One of the new developments in environmental sanitation has been the examination of air and the development of technical procedures whereby air may be disinfected. It has been shown through bacteriological studies that it is possible to disinfect air by means of ultraviolet light and also by means of chemicals which may be sprayed into the atmosphere by means of special air-conditioning equipment. Up to the present time these procedures have been utilized only for small spaces, such as hospital wards and individual school rooms. This work is of importance and it may be a forerunner to the development of safe and efficient methods of air conditioning and disinfection of air in large buildings.

ADVANCES IN THE FIELD OF CHEMOTHERAPY AND ANTIBIOTIC THERAPY

A. CHEMOTHERAPY. It is now accepted that the sulfonamide drugs are effective especially in pneumococcal, streptococcal and meningococcal infections. The recent statements with regard to the efficiency of these agents in gonococcal infections indicate their effectiveness in Neisserian infections. In studies in which the patient has been under controlled conditions, the results of treatment of gonorrhea with sulfathiazole and sulfadiazine have been better than under circumstances of ordinary civilian activities. The use of the sulfonamide agents in these diseases represents a great advance not only from the standpoint of the reduction of mortality, but in reducing communicability. In regard to the latter point, in view of the known development of sulfonamide resistant strains of gonococci, it is of great importance that persistent efforts be made to provide some plan whereby gonococcal infections may be treated and managed more effectively in civilian practice.

One of the most important discoveries of the past few years has been the demonstration of the effectiveness of the sulfonamides in the treatment of bacillary dysentery, especially of the paradysentery in the treatment of organisms. The work of Hardy and Watt has demonstrated that in endemic dysentery areas, a high proportion of household contacts are dysentery carriers, mild or missed cases. It is possible with the use of the sulfathiazole and sulfadiazine to treat carriers effectively and reduce further hazards to the family and the community. Unfortunately, up to the present time these drugs have not been shown to be effective in Salmonella infections.

During the past ten years arsenical agents of phenarsine type, mapharsen and chloarsen, have been developed. These have been especially important in the treatment of syphilis, not only in the treatment of the disease by the routine procedures, but they are the drugs used as the arsenical agent in practically all of the intensive or modified intensive methods of treatment.

ANTIBIOTIC THERAPEUTIC AGENTS. Everyone is familiar with the rediscovery of penicillin and its application to the treatment of infectious diseases. It is most effective in most of the diseases in which the sulfonamides may be used and it has the added advantage of being more efficient in control of systemic staphylococcal infections than any other agent developed up to the present time. Its effectiveness has been demonstrated in the treatment of diseases of gonococcal etiology. One of the most recent reports indicates that investigations are now being conducted to determine whether or not penicillin may be used for treatment in ambulatory patients who have Neisserian infection. Not only is penicillin important as a therapeutic agent, but no doubt it will lead to other investigations in the field of antibiotic therapy which, at the present time, are under exploration.

CHEMOPROPHYLAXIS. A great deal has been written in regard to the use of sulfonamide drugs as chemoprophylactic agents. Their use has been advocated for the prevention of upper respiratory infections, meningococcal and streptococcal infections and as a prophylactic agent against gonococcal diseases. Up to the present time, there is no good statistical evidence that these agents are of value in the prevention of the common cold and related respiratory diseases. There is some evidence that, under controlled conditions, they may be effective in reducing the number of carriers of these organisms in a selected population. The use of sulfathiazole and sulfadiazine as a prophylactic agent against gonococcal infections has not been investigated sufficiently to make a definite statement, but Pelouze has reported that the agents apparently suppress the clinical manifestations of gonorrhea with the result that the infection is masked, and the individuals are very likely to become carriers after such a procedure.

Public health officials, no doubt, will be called upon for an opinion as to the value of these agents in the prophylaxis of communicable diseases for use in the population as a public health measure. I do not feel that they are advisable because: (1) The indiscriminate usage of such agents is dangerous since these drugs are not harmless. Even when they are given under controlled conditions, a certain proportion of individuals develop undesirable toxic reactions. The indiscriminate use of them in the general population would definitely lead to reactions and an occasional death would occur. (2) Sensitization of individuals to these drugs would make it difficult to administer them in the future in the event that they become necessary. (3) Individuals would develop a false sense of security and in many instances sulfonamide resistant strains would develop. (4) A certain number of individuals, even though they are taking sulfonamides, would become carriers of pathogenic microorganisms and they would assist in continuing the spread of the disease. (5) Individuals taking these drugs, no doubt, would fail to observe the ordinary rules of personal sanitation, of prophylactic chemotherapy were available, and would exhibit no restraint in the matter of exposure.

PUBLIC HEALTH ADMINISTRATION

In the field of public health administration there have been several important developments. In tuberculosis control the realization of the necessity for the development of field diagnostic units as a case finding measure has been emphasized. More early cases of tuberculosis can be found by this means than by any other procedure. Along with the development of the diagnostic units, there has also been a definite movement to provide hospital beds for those states in which none are available and to increase the number in those areas where state hospitals were not adequate to take care of the problem. Since the onset of the war the idea of mass x-ray examination of entire population units by means of the photofluroscopic x-ray equipment has gained ground rapidly. Some states have already begun to employ this method of x-ray examination on an experimental basis for selected population groups.

It should be emphasized, however, that in order to carry out the purposes for which examinations by this means are made—namely early diagnosis—that facilities for hospitalization and follow-up of these patients should be made available at the earliest possible moment. A large proportion of the patients who have x-ray examinations as a result of this program will be found to be in the minimal stage of tuberculasis. Unless treatment facilities are available to care for them within a reasonable time many of the lesions will progress to the moderately advanced stage of tuberculosis and a great many people will migrate into other areas and will not have the advantage of proper care.

In the field of venereal diseases, two developments have occurred which should be mentioned. One is the development of procedures for intensive or modified intensive methods of treatment of syphilis which utilize the phenarsine arsenicals, bismuth, heat therapy, and penicillin according to various plans and the use of the sulfonamide drugs and penicillin for the treatment of gonococcal infections. The other procedure has been the demonstration of the feasibility of providing treatment in hospitals for patients who have venereal diseases. The latter development was brought about because it is necessary to hospitalize patients who are receiving one of the many various types of intensive treatment. The provision for such plans of treatment by public health agencies is important because of the possibility for curing a high proportion of patients who are treated by these methods. The communicability of these infections can be reduced very rapidly due to the efficiency of these agents in clearing lesions of the Treponema pallida and in reducing the infectiousness of gonococcal lesions. The rapid treatment centers have been provided as a result of the situation created by the present war. They have served, however, as demonstrations of the feasibility of hospitalization in a program of venereal disease control. It is quite possible that public health administrators will give consideration to a continuation of hospital facilities of some type after the war-time emergency has passed.

In the past two years considerable thought and effort have been given to the problem of local health service. Studies are going forward at the present time and proposals have already been made for a revision of local health services. The objectives of these proposals are to: (1) develop health service on a population unit basis; (2) provide adequately trained personnel for each of the proposed units; and (3) by carrying out this plan to improve the quality and coördination of the services for the country as a whole.

ADVANCES IN THE FIELD OF PUBLIC HEALTH EDUCATION

In this field of public health, two important advances have been made in the past decade. The techniques of public health education have been improved greatly as a result of the development of motion pictures and radio broadcasting facilities. In addition, newspapers, while they have always coöperated with the public health administrators, have continued to print material furnished by health agencies. The newspapers have also changed their point of view in regard to furnishing information concerning venereal diseases. The magazines for the lay public which are distributed on a nation-wide scale have probably included in their publications more articles on matters of health in the past ten years than during any other period in their existence.

In the field of public health education for the masses, local, state and federal health agencies have not kept pace with the rapid advance in the knowledge related to public and personal health. This is a question of vital importance since public health education, as it is carried on by the average local health department, is still conducted to great extent on an individual patient basis. What we need is to provide more people more rapidly with accurate health information.

Since 1935, provisions for improvement in education and training of public health personnel have been provided as a result of the passage of the Social Security Act. Since that time a large number of individuals have received grants with which to secure their basic education, or an extension of their experience in public health. This will undoubtedly have a marked effect, especially in the field of public health education, since a high proportion of these workers has been employed in local health departments. This program has gone forward, but in a much smaller degree during the present war. It is highly probable, after the war, that the education of professional personnel for the fields of public health will again receive major emphasis.

The foregoing sections of this paper have dealt with the improvements, discoveries, and trends in the various fields of public health activity as they relate to the control of communicable diseases. It is important that public health administrators provide facilities to carry out new procedures as soon as they have been proved to be reliable and effective. It should be pointed out that with the introduction of these new techniques and procedures into the public health program that new problems will be created. For example, reinfection with the spirochete of syphilis has now been reported to be occurring more frequently, since we have started to use the intensive methods of treatment of syphilis. Thus, we are able to cure an individual who has acute syphilis and make it possible for him to acquire a new infection. The same situation exists in the case of gonococcal diseases. With the introduction of these new procedures into the public health program there is also the responsibility for providing for the new problems which will arise. Health departments, therefore, should anticipate the additional problems which will ensue. They should assume the responsibility for providing sufficient personnel and facilities not only for the application of measures for prevention and control, but also for public health education from the point of view of the individual and mass approach. Thus, the fullest benefits derived from the provision of these facilities may accrue and the prevention of disease may be placed on a more lasting basis.

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The Peripheral Vascular Circulation in Certain Eye and Nose Conditions*

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THE CIRCULATION of the blood is one of the body's most vital functions. The peripheral vascular system ranks next or equal to the heart in the maintenance of adequate circulation. In health there is a perfect and delicate balance of the vascular system and its neuromuscular mechanism of control. Libraries have been written on the subject, but in this paper I shall briefly discuss only a few peripheral vascular disorders that affect the eyes and nose.

In the eye we can observe directly with the ophthalmoscope certain well defined and familiar disturbances of the retinal circulation such as are seen in hypertension, nephritis, diabetes, and other conditions. I have nothing to add on this subject.

In the past few years, Duggan[1], [2] has ascribed to angiospasm and successfully treated by vasodilators the following conditions:

Optic neuritis (including the retrobulbar peripheral angiospasm, this confirms Duggan's episcleritis. Not everyone agrees in full with Duggan in this matter. Many of us have been disappointed in the treatment of some of these cases with intravenous sodium nitrite, while other cases have responded nicely. Peterson[3] has taken Duggan's cases, charted their ups and downs on a graph, plotted them above curves of barometric pressure and temperature for the same periods and has found a striking parallelism of the curves. When the temperature has dropped sharply, the activity of the diseased condition of the eye has risen. As it is well known cold temperatures cause peripheral angispasm, this confirms Duggan's ideas, at least in many cases. It is worthy of more consideration by clinicians and investigators.

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*Read before the Section on Eye, Ear, Nose and Throat at the Mississippi State Medical Association, May 9, 1944.

CENTRAL ANGIOSPASTIC RETINOPATHY

Gifford[4] has carefully studied and named a condition which he calls central angiospastic retinopathy. It seems to be definitely a disturbance of the peripheral vascular circulation of the macular region. It has been reported previously under such names as retinitis-centralis, juvenile exudative macular retinitis, and flat detachment of the macular retina. Since the condition is not of inflammatory origin, the term retinopathy seems preferable.

Most patients with this condition have noted undue distress on exposure of the extremities to cold. Their hands become white when elevated and flushed or cyanotic when hanging down. When tested with a skin thermometer, there is an abnormal difference between the oral temperature and that of the extremities. Three to four degrees Fahrenheit is normal, but vasoneurotic individuals may have as much difference as ten degrees. Smoking a cigarette will cause a further drop of six to twelve degrees. A normal person will show a drop of only four to five degrees. Many young persons show marked peripheral angiospasm without elevation of the general blood pressure.

None of my patients had high blood pressure. The usual history in central angiospastic retinopathy is a sudden reduction of central vision, maybe only distortion of vision or things may look too large or too small. Only the macula is involved in most cases. All my cases are unilateral, but it may be bilateral. A transient hyperopia may be present due to the elevation of the retina. There is a central scotoma, large or small, relative or absolute. In early cases, the predominant fundus picture is macular edema with surrounding circular reflex; later, after the edema there are retinal pigment changes. Most patients are smokers. The vision returns to normal in one to six weeks under vasodilator therapy.

The following treatment was used by me in these cases, in whole or in part: 1) complete abstinence from tobacco, 2) protection of the body from cold, 3) typhoid vaccine in the vein for its vasodilating effect, 4) papaverine —½ grain t. i. d. for several months, 5) nicotinic acid—50 mg., t. i. d., as a vasodilator, 6) a diet containing plenty of calcium and vitamins, usually supplemented by panvitamin therapy, 7) endocrine therapy where indicated, 8) depropanex—2 cc. in the muscle three times a week for six or eight weeks, 9) plenty of rest and avoidance of nervous strain advised.

CASE REPORTS OF CENTRAL RETINOPATHY

CASE 1. January 1, 1944. R. G., white, male, age 20, farmer comes in with chief complaint of vision coming and going in right eye for one week. No pain

P. H. Has always taken cold easily, especially if he gets cold or damp. Had a bad head cold with a "touch of flu" three weeks previously. Has smoked three or four years. Smokes one can of Prince Albert as "roll your own" every five days. General health has been good. No previous eye trouble.

P. E., V. O. D., 20/100 and V. O. S., 20/15. J 1 in left eye. Can't read print with right eye. Conjunctivae, pupils, corneae, lenses, media and tension all normal. The right fundus was normal except for a very definite macular edema with a surrounding circular light reflex. His sinuses were not tender and transilluminated well. The nasal mucosa was pale and swollen but shrank nicely with a benzedrine inhaler. His septum, nasopharynx, oropharynx, larynx, teeth, gums, and tongue were normal. His tonsils were large and chronically infected. B. P., 118/78, temperature 100° F., W. B. C. 8,000, R. B. C. 4,140,000, Nbg. 75%. Differential was normal. Urine and Wassermann, normal. Fields and blind spots were normal in the left eye. The right eye showed an absolute scotoma about 5° in diameter in center of fixation and another smaller one below and nasal to this and within the 10° circle. Mariotto blind spot was normal in size and shape. These scotomata were dense enough to map out with a 4 mm. white object at 1 meter distance.

A diagnosis of central angiospastic retinopathy was made, and he was given ½ cc. of promanulake (foreign protein) in the muscle and ½ grain of erythrol tetranitrate to take at home by mouth t. i. d.

January 3, 1944. No better. V. O. D., 20/100. Same findings. Given another ½ cc. promanulake in the muscle. Continued erythrol tetranitrate. Advised to leave off smoking and avoid all exposure to cold.

January 7, 1944. V. O. D., 20/30 +1 V. O. S., 20/15. Temperature, 99⅗° F. Right macular region looks definitely better. Given 0.4 cc. typhoid H. antigen intravenously (40 million organisms). Continue erythrol tetranitrate.

January 14, 1944. Is still smoking. Advised to quit for life or at least until his eye is all right. Says vision is better. Fundus looks better. Given typhoid H. antigen 0.5 cc. (50,000 organisms) in the vein. Discontinue erythrol tetranitrate. Take 50 mg. nicotinic acid t. i. d., before meals.

January 21, 1944. V. O. D., 20/20, V. O. S., 20/15. Is now smoking only three cigarettes a day. Advised to quit smoking entirely. Given 5 cc. proteolac in the vein. Continue nicotinic acid.

February 4, 1944. V. O. D., 20/15, V. O. S., 20/15. No central scotomata. Has stopped smoking now. Edema in macular region is all gone and is replaced by a coarse black stippling due to changes in retinal pigment. Advised to return in one month, but did not do so.

CASE NO. 2. February 8, 1940, white, female, age 35, housewife.

P. I. Three weeks previously suddenly noticed the vision blur in her left eye, and she could see a spot in front of her.

P. H. Previous trouble like this occasionally for years as aura of migraine attacks, but all others had worn off in 30 minutes. Cold hands and feet for years. Menstrual disorders and nervousness for years. Her doctor has had to give her ovarian extract frequently.

P. E. V. O. D., 20/15, V. O. S., 20/50. Pupils, conjunctivae, corneal, tension, media, and right fundus are all normal. Left fundus normal except for macular region where there is a definite elevation and discoloration. The normal macular reflex is absent. The area of edema is 1½ times the size of the optic disc. The blind spots of Mariotte are normal. There is a large relative central scotoma in the left eye.

Diagnosis: Central angiospastic retinopathy.

Treatment: Bromides. Keep as warm as possible. Daily intravenous injections of 12 to 25 million killed typhoid bacilli to be given by her home doctor.

February 27, 1940. Doesn't know whether she is any better or not but vision and fundus are better. V. O. D. 20/20, V. O. S. 20/25 -2. Advised to continue typhoid shots and to take one tablet of dicalcium phosphate with viosterol t. i. d.

March 8, 1940. V. O. D. 20/20 -3, V. O. S. 20/20 by straining. Says vision is definitely better. Her last typhoid shot gave her considerable reaction. To leave it off. Instead take 100 mg. sodium nitrite intravenously daily for six doses.

March 19, 1940. Got no generalized reaction from sodium nitrite shots. Sees better. Refracted under cycloplegic and get 20/15 -1 in each eye.

P. E. No edema of macular region now but does have small yellow spots where it was.

March 26, 1942. With glasses, V. O. D. 20/20 and V. O. S. 20/15 -3. Says spot returns now whenever she is around fresh paint. No treatment advised except to avoid paint.

In addition to these two typical cases of central angiospastic retinopathy I have treated in this manner three cases of central chorioretinitis and five or six cases of retrobulbar neuritis with satisfactory results in all.

So much for the eye. Meniére's disease, certain types of tinnitus, and some cases of deafness doubtless have circulatory backgrounds. I have nothing particularly worth while to report on this subject. I do wish to report three cases of vasomotor rhinitis, due to temperature changes and benefited by vasodilator therapy.

It is normal for the nasal mucosa to respond to peripheral temperature changes. Certain patients report that they catch cold right away from getting in a draft, getting wet, or chilled, or sometimes from getting too hot. Patients with cold allergy may be so sensitive that immersion of the hands in water at 8° or 10° Centigrade for five minutes will cause marked drop in blood pressure, faintness, syncope, and sometimes severe shock. Histamine or some histamine-like body is turned loose into their general circulation from the exposed extremities. This gives the theoretical basis for treatment with histaminase (Torantil) and desensitization with histamine. Williams[5] got the same percentage of good results by treating these patients with intravenous nicotinic acid. I have used it by mouth only and have had some good results and some not very good.

CASE REPORTS

CASE NO. 1. Mrs. G. B., a white female, age 35 had been seeing me every few weeks for over a year for treatment of a chronic purulent otitis media which would never get entirely well but was never bad enough for me to advise a mastoid operation. Her nose was always stuffy. She always caught fresh cold every time she did her laundry, every time her feet got cold or wet. The nasal mucosa was always pale and swollen. While treating her ear, I treated the nose by Proetz displacement many times, and also by argyrol packs with no apparent real benefit. All the different types nose drops gave only very transient shrinking of the nasal mucosa. Vitamin therapy as multi-vitamin capsules made her feel better but did not help the nose. In October 1943, she was started on nicotinic acid 50 mg. t. i. d., before meals. This did not cause much flushing of her skin, so it was increased to 100 mg. t. i. d., before meals. This gave a very uncomfortable flushing early in the morning and only slight flushing at the other meals. The dosage was then changed to 50 mg. before breakfast and 100 mg. before the noon and evening meals. In two weeks her nasal mucosa was normal in color and not swollen. She could breathe well and was not susceptible to temperature changes. She has had only one head cold to amount to anything these past five months and that seemed to be an ordinary infectious coryza with red nasal mucosa. She has now discontinued the nicotinic acid and seems to be getting along very well without it. Her O. M. P. C. is slowly improving under treatment, but it did not show the improvement I had hoped for from the betterment of the nasal condition.

CASE NO. 2. Mrs. D. C. S., white female, age 24, was first seen October 18, 1943, complaining of constant postnasal drip for the past six or eight years. For several months or a year she had run a temperature of 99⅗° every afternoon. The postnasal drip is watery at times, thick at others. When watery, it makes her gag and choke. Recent menstrual difficulties were not relieved by shots given by the local general practitioner; so he sent her to a very excellent internist, who examined her thoroughly including complete blood and urine studies, basal metabolism, chest x-ray, sputum examination, tuberculin test, and a complete physical. All were negative.

For years she has caught fresh cold if exposed to cold temperatures, if she washes her hair, or takes a tub bath. Has had to sponge bathe one member of her body at a time, drying it thoroughly before proceeding to the next part of body. If she changes dresses so that the sleeves of the new dress are two or three inches shorter than the old one, that portion of the body feels chilly and in an hour or two makes her sneeze. Her feet are always cold to the touch. She does not smoke or drink. Her nose is always worse if she eats any kind of fruit, especially so after pineapple. No family history of allergy. Her skin is usually rough in cold weather, worse where exposed.

P. E. Underweight, but not acutely ill. Temperature, 99⅗° F. B. P. 120/80. Sinuses were not tender and transilluminated normally. Sinus x-rays showed only moderate thickening of mucosa in all the sinuses. Ears, teeth, gums, and tongue were normal. She had large chronically infected tonsils, no adenoids, but mucosa of the nasopharynx was red. The septum was straight. The nasal mucosa was red and congested but shrank fairly well with benzedrine. The history suggested allergy but the red nasal mucosa did not.

Treatment: Biologic diet of Searcy with organic iodine and hydrochloric acid with meals. Sulfedex nose drops.

November 24, 1943. Has felt much better since she started on this treatment. The postnasal discharge is not so watery now, is easier to spit out and no longer nauseates her. Histamine skin test (0.1 cc. of 1 to 5000 dilution intradermally) was positive. The wheal was 12x12 mm. with pseudopods and the "flare" was 50x150 mm. On the basis of this positive histamine test was given histaminase (torantil) on ten-unit tablet, t. i. d.

December 22, 1943. Feels much better since taking torantil. To take it for one more week and then leave it off and start nicotinic acid, 50 mg. t. i. d. before meals. To increase the dose if no flushing occurs.

February 4, 1944. Felt much better while taking torantil than with nicotinic acid. Her feet stayed warmer while she was taking torantil. Two 50 mg. tabs of nicotinic acid make her flush so much that she perspires and catches cold. To leave off nicotinic acid and resume torantil. Also to take depropanex 2 cc. in the muscle once or twice a week to help the circulation in her extremities.

March 10, 1944. Felt wonderfully better. Has discovered that if she washes her hair in cool water instead of warm she doesn't catch cold nearly so badly. Immersion test for cold allergy was made today and is negative. If this test had been made earlier, I feel that it probably would have been positive. She is very happy over the improvement she has already shown.

Treatment:

1. Continue torantil indefinitely.
2. Change to 1% racephedrine nose drops.

3. Take only 5 more shots of depropanex
4. Begin desensitization to cold by immersing hands in water at 50° F. daily, increasing from one up to five minutes. Later immerse feet too and very gradually to work to where she can take a quick cold shower.

In my opinion this is a definite case of cold allergy. She is one of the most grateful patients I have ever had.

CASE NO. 3. Mrs. W. D. H. White, female, age 23, housewife, came to see me June 29, 1943, complaining of soreness in and behind right ear off and on for the past five years, following an attack of measles. Has headache mostly on the right side whenever the ear is sore. Is not subject to head colds but does have many sore throats. None recently. Had not had fever that she knows of but it was 100° when I took it. Pulse was 100.

P. E. No sinus tenderness. Good illumination. The nasal mucosa was red and congested on the right side but shrank fairly well with a benzedrine inhaler. Ears, teeth, gums, tongue, oropharynx, normal. Heart and lungs were normal. Right auditory tube inflated and was open well. Hearing was normal apparently. Some mucus could be seen in the right spheno-ethmoidal recess. Cocain mud applied topically to right sphenopalatine area caused pain in her head rather than relieved her headache. She was rather obese.

Laboratory: Urinalysis was normal. W. B. C., 14,600. R. B. C., 3,950,000. Hgb., 75% Talquist. Kline exclusion and tests for undulant fever, tularemia, typhoid, paratyphoid and Proteus x19 were all negative. Blood culture was negative.

Clinical diagnosis: Subacute sinusitis, right sphenoid and ethmoids.

Treatment: 1% racephedrine nose drops. Riona capsules p. r. n. for pain. Two sulfadiazine tablets four times daily for three days.

July 6, 1943. Temperature 100⅖°. Pulse 110. W. B. C. 15,200. Head has felt better, but ear has hurt worse. Fever every day. No rigors. Constant tinnitus, right ear. Sinus x-rays were taken and showed cloudiness of right sphenoid and some haziness of right antrum.

Right sphenoid was irrigated with saline through natural ostium. Some shreds could be drawn back into the syringe but no pus. Cytological studies of this showed a few pus cells, no eosinophiles. The natural opening of the antrum was not accessible so the antrum was not washed this time. A patch tuberculin test was applied. Novalene ½ tablets t. i. d., was prescribed.

July 14, 1943. Head felt a little better for two days after last visit. Temperature 99⅗°. W. B. C. 10,600. R. B. C. 3,600,000. Hgb. 75%. Proetz treatment with racephedrine was given and ribothiron prescribed.

July 19, 1943. Has felt much better. Temperature is still 100°. Given a Proetz treatment with racephedrine. Given 0.1 cc. of 1 to 5 dilution of Lederle's melitensis vaccine intradermally.

July 20, 1943. Had a positive skin test for undulant fever. Area of redness and edema is 15 mm. in diameter.

July 24, 1943. Arm still shows reaction. She says it got larger after last visit. Given 0.2 cc. of melitensis vaccine subcutaneously.

After this she was given the vaccine about twice a week, 0.5 cc. at a dose for two months. It definitely seemed to help her. She was given Proetz treatments several times during this period.

November 2, 1943. Still having headaches, not quite so frequently nor so severely as when I first saw her and still having temperature of 99½° to 100° every time I saw her in spite of her course of vaccine. I was never convinced that she had a definite case of undulant fever. The definite benefit she received from the therapy may have been from the foreign protein effect. She now has a pale congested nasal mucosa, and gives history of being very sensitive to drafts blowing on her or to getting wet. Says it always makes her head stop up and hurt worse. Having just heard a paper by Dr. Henry L. Williams of the Mayo Clinic on nicotinic acid in the treatment of vasomotor rhinitis, I prescribed for her 50 mg. of nicotinic acid t. i. d. before meals.

November 16, 1943. Headache is better. Nose still stuffed up. Given a Proetz treatment. Dosage of nicotinic acid doubled to 100 mg. t. i.d. before meals.

November 30, 1943. Nose stays open much better. Very few headaches but still has a little pain in and behind right ear. Is sure that nicotinic acid has helped her a lot. Temperature is 98⅗° F. today, the first time that I have found it normal. Nasal mucosa looks normal now.

She has continued taking nicotinic acid, 100 mg. before breakfast and 50 mg. before the other two meals. I have seen her twice more at monthly intervals and she is still doing fine. At last visit was told to leave off nicotinic acid but to start back right away if symptoms recur.

SUMMARY

Central angiospastic retinopathy is described and the treatment outlined. Two cases are reported in detail.

A very brief discussion of the effect of changes in peripheral temperatures on the nasal mucosa is followed by three complete case reports of vasomotor rhinitis caused largely or wholly by physical allergy and relieved by vasodilator therapy.

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DISCUSSION

DR. HUGH JOHNSTON (Vicksburg)—I believe that vasodilating drugs have a definite place in certain cases of retrobulbar neuritis.

Retrobulbar neuritis may be roughly divided into three groups, 1) those in which systematic disease plays a part, the retrobulbar neuritis being a symptom; 2) those in which peripheral contraction of the fields is the outstanding finding, and 3) those in which caecocentral scotomas are the principal finding. For the first group, prognosis and treatment are those of the systemic disease. In the second group there is usually some constriction of the vessels of the fundus. Much that is called toxemia in these cases is anoxemia of the retina. Most benefit is obtained with vasodilators. In the third group thiamin hydrochloride should be given and proper precautions taken to see that as much of the vitamin as possible is made available for the nerve tissue. Since toxicity may play a part in every type of retrobulbar neuritis, every effort should be made to discover and remove a focus or contact.

Benedict thinks there are too many sinus operations for retrobulbar neuritis. In this respect he states that in ten years no patient with retrobulbar neuritis had had a recent acute sinus disease, nor had there been a single patient with severe sinus disease associated with retrobulbar neuritis.

It seems that nicotinic acid is gaining an important place in the treatment of vasomotor rhinitis. Dr. Caruthers is to be congratulated on the fine results obtained in his case.

It is my experience that the hypertrophied and infected lymphoid tissue in the nasopharynx is an important factor in causing and maintaining the nasal symptoms, particularly in children.

Many cases of allergic rhinitis are due to the inhalants and other causes, but bacterial infection of the sinuses and nasopharyngeal lymphoid tissue must not be ignored. If these complications are not evident in the early stages of allergic rhinitis, steps must be taken to prevent their recurrence.

As in any new type of treatment, we are sometimes guilty of using it in too many cases where it is not particularly applicable. Dr. Caruthers' good results are due in no small measure to his skill in carefully selecting his cases after thorough examinations have been made.

Some Observations on Lupus Erythematosus*

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My first impression of lupus erythematosus, which was an erroneous one, was that it is a chronic (banal) dermatological problem that never killed anyone, yet is very difficult to cure. I believe that this is a common impression among a great many physicians who are not primarily interested in dermatology and perhaps in a few who are interested. Beckman and Obermyer in their rather recent book, *Modern Dermatology and Syphilology* bring this point out and respect the condition enough to set it aside from other diseases of like nature and suggest to change the name from lupus erythematosus to erythematodes which they claim more nearly fits the condition.

The cause is obscure. Women are affected about three to one with reference to men, and Negroes much less than white people. There are certain factors which have provoked much speculation and many theories concerning its cause, most of which are beyond the scope of so elementary a discussion as this. My own belief is that it is a skin manifestation of a systemic disease being caused by a focus or foci of infections. Tuberculosis has been proved by some investigators to be responsible and disproved by others. Even a filterable virus type of tuberculosis has been investigated in which the tubercle bacilli were recovered after a third passage of the material through the guinea pigs. The histopathological picture is fairly constant but varies with the stage of the disease and the type of the lesion biopsied. The classical picture of a discoid lesion is a relative and absolute hyperkeratosis with plugging of the hair follicles and even sweat ducts, alternating atrophy and acanthosis of the epidermis areas of liquifaction necrosis of the basal layer and a dense lymphocytic infiltration.

Although this may sound a bit strange, the diagnosis clinically can be confused with tuberculosis, seborrhea, rosacea, neurodermatitis, ringworm of the scalp, alopecia aerota and worst of all erysipelas. The point to be gained from this particular fact is that the treatment for psoriasis would certainly aggravate lupus erythematosus and to treat an acute lupus erythematosus as if it were erysipelas would be absolutely fatal and I do not mean this figuratively. An acute lupus erythematosus looks like erysipelas, and cases have been treated as such with fatal results. Any shock therapy or therapy involving shock is extremely dangerous if employed in a case of acute or subacute lupus erythematosus. Just recently I had a patient who had what looked like an aberrant psoriasis and I undertook cautiously to start her on the Goeckerman treatment for psoriasis. After the air was tested out for several days to find whether she was sensitive to it or not, she was asked to expose one small area with the tar on it for three minutes. She suffered some nausea and waited two days and tried it again. This time she became more ill and developed edema of her hands and arms and refused to go any further with the treatment, and I decided to discontinue all therapy. This was, as far as I could tell, a case of disseminated lupus erythematosus. Biopsy was refused, and since the patient had had it for some time, and was fairly well, I decided to leave her alone.

Gold has been used in the treatment of lupus erythematosus for long before my entrance into the medical profession, but it has always carried considerable hazard with a chance of producing blood dyscrasias. I have always shied away from it. The French dermatologists started bismuth in oil intramuscularly and reported good results. Dr. George Miller MacKee used to treat some of his patients with quinine by mouth, a sulphur lotion topically and a cream to protect them from the sunlight. Much to my surprise these patients improved. I have used this in some of my own cases with improvement. I do not recommend it as a routine treatment or as a positive cure.

The most logical approach in therapy in my opinion would be to treat all patients according to what stage of the disease they are in, that is to say, acute, subacute or chronic, sometimes these stages overlap.

In the mill run of cases with chronic discoid lesions the usual area will be the face with a sort of butterfly distribution leading in site of predilection. This is not necessarily true for it might be anywhere on the face or anywhere else. I usually start with quinine sulphate and potassium iodide by mouth concurrently and give them a protective cream to apply to the lesions topically. This treatment is kept up for six to eight weeks at least and then the patient is put on bismuth in oil intramuscularly in the gluteal region once each week just as if he were being treated for a specific infection. This is kept up for eight to ten weeks and whether the lesions regress or not the patient is put back on quinine and iodide for six to eight weeks longer. I also believe that a high vitamin A and D intake is indicated and protection from the sun is absolutely essential to the success of the patient's recovery. At this period if the lesions have begun to regress, one may start a careful search for a focus of infection with a gradual and careful elimination of same. A large percentage of these patients have infected teeth or tonsils or both. Some of them have absolutely no foci that one can locate.

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*Read before the Section on Medicine at the Mississippi State Medical Association, May 10, 1944, Jackson, Miss.

The subacute variety is best treated very gently with no effort being made to remove any foci until after the condition has begun to subside under quinine therapy and general tonic measures. X-ray and ultra violet is contraindicated in all stages in my opinion and especially so at this time. The treatment after it has begun to subside is the same as in the chronic cases. The acute cases will sometimes resemble erysipelas but at other times will not resemble erysipelas at all, and the only thing present that resembles is a faint erythema (erythema perstans) and/or possibly a silvering of the lips. These cases should all be hospitalized in order that a close laboratory check may be kept on them. One of the most constant symptoms found in this particular stage of the disease is a marked leucopenia. This may be accompanied by a septic temperature, joint pains, muscle pains and other signs and symptoms of toxic conditions. The treatment is quinine by mouth to tolerance, intravenous glucose and transfusions. The majority of these cases progress to fatal termination.

The Libman-Sacks syndrome which was brought out only a few years ago and which is still doubted by some as being an actual part of lupus erythematosus is to be discussed in detail by Doctor W. K. Purks who is an internal medicine man and under whose jurisdiction this particular phase should certainly fall for it is only here that the patient would be able to get care and treatment for his cardiac condition which is a part of the Libman-Sacks syndrome.

DISCUSSION

Dr. W. K. Purks (Vicksburg)—In recent years there has been much discussion of lupus erythematosus, particularly regarding the acute disseminated type and the systemic manifestations that accompany it. In view of the fact that this well recognized clinical syndrome is as yet of unknown or uncertain etiology, it is not surprising that considerable confusion exists regarding the disease. This is further accentuated by the fact that wide differences of opinion exist as to the pathology of the disease. One thing at least is very definite, namely that the recognition of acute disseminated erythematosus is completely dependent upon a recognition of the skin lesions[1],[2] and in those cases where other features of the disease appear first we can only suspect the nature of the process.

Among systemic diseases that are often associated with acute disseminated erythematosus and that are considered by some as a part of the syndrome we may mention[3] 1) the erythema group of diseases described by Osler in 1904, 2) Libman-Sacks syndrome of verrucous endocarditis (1924), 3) fever of unknown origin described by Christian (1935), 4) diffuse peripheral vascular disease described by Baehr and others (1935), 5) Senear-Usher syndrome.

Pathologically these syndromes have only one thing in common, namely, a tendency to thromboses of the arterioles and capillaries. The pathology is otherwise very dissimilar in these syndromes and the clinical manifestations vary accordingly. Montgomery[1] and Stickney have rarely found vascular lesions either in the skin or organs of patients with acute disseminated erythematosus. This is at variance with the findings of most authors.

I have been requested particularly to discuss the Libman-Sacks syndrome. In 1911 Libman first recognized this disorder which he and Sacks finally reported in 1924 as a "Hitherto undescribed form of valvular and mitral endocarditis" or "atypical verrucous endocarditis." Although some authors[3] find this type of endocarditis associated with a high percentage of their cases of acute dis-disseminated lupus erythematosus, Montgomery and his associates found not one case of atypical verrucous endocarditis in 154 of lupus. Seven of this same group had endocarditis of rheumatic origin associated with the presence of Ashoff bodies. Gitlow and Goldmark[4] quote Roxburgh as finding only five cases of endocarditis and lupus in St. Bartholomew's Hospital between 1906 and 1933. They also note that at Mt. Sinai Hospital there were only eleven cases of Libman-Sacks syndrome up to 1933. The condition, therefore, is a rare one. Libman-Sacks syndrome cannot be positively recognized clinically. It resembles rheumatic fever and subacute bacterial endocarditis in many respects. Levine and Contratto[5] have reported one case of Libman-Sacks syndrome that gave evidence of partial heart block which serves still more to confuse the clinical picture. The chief features of Libman-Sacks syndrome are[1], [2]: 1) fever (prolonged), 2) endocarditis (systolic murmur), 3) white centered petechiae, 4) blood cultures sterile, 5) absence of Ashoff bodies, 6) splenomegaly, 7) pericarditis, 8) pleuro-pulmonary complications, 9) embolic glomerulo-nephritis, 10) purpura, 11) anemia, 12) leukopenia.

Finally, we may say that although there is a syndrome such as that described by Libman and Sacks and although it is occasionally or frequently associated with skin lesions of acute disseminated lupus erythematosus, there is no conclusive evidence of an identical etiology or pathology of the two diseases.

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DISCUSSION

Dr. Thompson closing discussion—I wish to thank Dr. Purks for his able discussion. I have seen in the past year about twenty-three cases, mostly chronic, of lupus erythematosus. Whether I am seeing more people, or whether it means I am getting smarter, I do not know, but I did not formerly see that many. I have one patient now who, so far as I can tell, has an acute lupus erythematosus. He has been seen by two other doctors besides myself and they are convinced also that he has lupus erythematosus. I am not so sure he is sold on our diagnosis, but I do know that he is a very sick man.

APPROVED HOSPITALS IN MISSISSIPPI

Biloxi
*New Biloxi Hospital,
Veterans Administration Hospital
Brookhaven
*King's Daughters' Hospital
Centreville
Field Memorial Hospital
Columbia
Columbia Clinic-Hospital
Corinth
*McRae Hospital
Greenville
*King's Daughters' Hospital
Greenwood
*Greenwood-Leflore Hospital
Gulfport
Veterans Administration Hospital
Hattiesburg
South Mississippi Infirmary
Houston
Houston Hospital

*Provisionally approved.

Jackson
Jackson Infirmary
Mississippi Baptist Hospital
Meridian
Meridian Sanitarium
Rush Infirmary
Oxford
*Oxford Hospital
Sanatorium
Mississippi State Tuberculosis Sanatorium
State College
James Z. George Memorial Hospital
Tupelo
North Mississippi Community Hospital
Vicksburg
Mercy Hospital-Street Memorial
Vicksburg Hospital
Vicksburg Infirmary
Whitfield
Mississippi State Hospital
Winona
Winona Infirmary

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It is with deep regret that our state gives up Dr. J. C. Henthorne, an outstanding pathologist of Mayo training. He is not only an able pathologist, but he is a type of gentleman who is an asset to any state. We congratulate the Ochsner Clinic on securing his services. This clinic is rapidly becoming one of the outstanding centers in our nation on research and diagnosis. It is an asset to the entire Southland.

Dr. G. S. Bryan of Amory, the sage of Mississippi medicine, has been very ill the past several weeks. This we deeply regret. Our readers are missing him. Our hearts are all sad and full of sympathy. Dr. Bryan is a man of poise in medicine and liberally read. He has determination and a constitution that holds on. His fourscore years have not daunted his determination to keep informed and active in practice and even more active as a leader in organized medicine. He has rendered a fine service in medicine in Mississippi and his wise council is still needed greatly. We are hoping that he will have a speedy recovery.

A CENTENNIAL YEAR

W. A. Evans

Mississippi was endeavoring to improve its medical service prior to 1824 and possibly as early as 1820. The legislature passed a law providing for the examination and licensing of physicians and later passed other laws amending the first law during the decade between 1820 and 1830. The first law provided for two examining and licensing boards and the last one increased the number of boards to three. The first two boards called for a division of the state into two districts with a board for each. The last law provided for a board in north Mississippi. The boards met twice a year to hold examinations and issue licenses. The places of meeting were Monticello in Lawrence County and Monroe in Perry County. Later the meeting places were Jackson in Hinds County and Westville in Simpson County. The meeting place of the board for north Mississippi was Hamilton in Monroe County.

Some of the proceedings of the western board can be seen in the courthouse at Natchez. On February 4, 1829, the legislature enacted a law which provided that the governor must issue a charter to "The Medical Society of the state of Mississippi when petitioned to do so by ten or more physicians licensed to practice in Mississippi." If such a society was organized we do not know how long it continued to meet. There is fair evidence that there was a state medical society in 1846.

When the American Medical Association met in Baltimore in 1847 to perfect the organization which had been launched that year, the minutes show that three delegates had been appointed from the Mississippi Medical Society or some medical society in Mississippi. They were Doctors Rhein, Copes, and Phillips.

Dr. G. Kevin of Lexington is mentioned as being in attendance and in one of the papers read at the meeting there is a reference to a Dr. Bouchelle of Columbus, Miss.

In Norwood's *History of Medical Education in the United States* prior to 1861 it is stated that Mississippi had a State Medical Society in 1846. In a December 1856 issue of the *Sunny South* of Aberdeen nine physicians of Monroe County published a call for a meeting of physicians in Jackson on December 15, 1856, to form a state medical society. Among the nine signing the call were Dr. J. M. Heard and Dr. F. H. Evans, uncles of the writer, Dr. W. B. Rowland, Jr., a forbear of the late Dr. Rowland of Oxford and Dr. Dunbar Rowland of Jackson, and Dr. G. S. Bryant but not Dr. G. S. Bryan of Amory.

At the meeting held at Jackson on December 15, 1856, there were seventy-eight physicians in attendance. Dr. W. G. Gadberry of Yazoo City was elected president and Dr. H. F. Craft of Jackson was elected secretary.

In 1870 Mississippi had a state medical society. It appointed delegates to the American Medical Association, among whom were Dr. J. M. Greene and Dr. W. A. Evans, Sr., of Aberdeen.

The history of the Mississippi State Medical Association for the last seventy-five years is accessible. A reasonable estimate of the history is as follows:

1. Provision was made for the State Medical Society of Mississippi one hundred and twenty-five years ago. There is no known history of such a medical society having been organized, or if one was organized how long it continued to meet.

2. The evidence that there was a state medical society in Mississippi in 1846 is fairly good but not conclusive. No proceedings of such a society have been found.

3. A state medical society for Mississippi was organized on December 15, 1856. The call for this meeting stated that there existed a North Mississippi Medical Society. The proof that there was a state medical society in 1856 is conclusive.

4. There has been a state medical society in Mississippi for the past seventy-five years. The proof of this statement is not controverted.

Shall the Mississippi Medical Association celebrate a centennial year? If so, which year shall it celebrate?

Interpreting Medical Literature

STAFF OF REVIEW

Dermatology—**James G. Thompson, Jackson.**

Ear, Nose and Throat—**Edley Jones, Vicksburg.**

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Orthopedics—Thomas H. Blake, **Jackson.**

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DERMATOLOGY

Archives of Dermatology and Syphilology, December 1944; V. 50; No. 6; P. 413 and 415. "DRUG FEVER" ACCOMPANYING SECOND COURSE SULFADIAZINE AND SULFAPYRIDINE. Harry F. Dowling and Mark H. Lepper, Am. J. M. Soc. 207:349 (March) 1944.

Dowling and Lepper reviewed the effects of administration of sulfonamide compounds to 737 patients who had not previously reived a sulfonamide drug, 169 who had previously been given another compound and 144 who had previously received the same compound. Among patients who had received a second course of sulfathiazole, sulfadiazine or sulfapyridine after a varying interval had intervened since the first course of the same drug, 11.1 per cent acquired "drug fever." Eleven of these patients had a concomitant dermatitis, which in two instances was associated with conjunctivitis. Among patients who received a second course of sulfathiazole, sulfadiazine or sulfapyridine after a first course of another sulfonamide compound 3.6 per cent acquired "drug fever." During a single course of therapy five per cent had febrile reactions. Febrile reactions were more frequent after sulfathiazole and after sulfadiazine or sulfapyridine. It is concluded that when a second course of a sulfonamide compound must be given to a patient, regardless of the interval following the first course, another sulfonamide drug should be given.

DERMATOPHYTOSIS AND OCCUPATIONAL DERMATITIS. John G. Downing, J. A. M. 125: 196 (May 20) 1944.

Even with much dermatologic experience a positive diagnosis of fungous infection of the hands is often erroneous without laboratory confirmation. Industrial dermatitis rarely persists because of secondary infection with fungi. Dermatophytes do not find the site of active inflammatory industrial dermatitis a suitable terrain for growth; the secondary invaders are pyogenic bacteria. A person suffering from a contact dermatitis is no more subject to mycotic infection than one with normal skin. Certain types of mole and yeastlike bodies have been found persistently in certain occupational rashes owing to the presence of these organisms in the contacts, but that does not prove that these saprophytes are the pathogens, such as Monilia albicans, trichophytons and epidermophytons, are seldom found as secondary invaders of the sites of occupational dermatitis. Dermatophytids on the hands produce sites of lowered resistence sufficient to break the skin and allow the mechanical and chemical contacts of industry to aggravate the original eruption. In many cases of so-called occupational cutaneous dermatitis the lesions are merely aggravations of previous mycotic infections. Dermatophytids appear spontaneously and are pin-head-sized vesicles with thick walls. They are symmetrically placed on the lateral aspects of the fingers and on the thenar and hypothenar eminences; occasionally they involve the entire palm, rarely the dorsum of the hand. Contact dermatitis usually shows areas of erythema, scaling, thin-walled vesicles, papules and wheals, an ill defined eruption rarely symmetric, usually involving the dorsa and starting on one area and spreading slowly or rapidly. "Dyshidrosis" is an entity composed of deep-seated sago-grain-like vesicles, appearing suddenly and disappearing with or without treatment. Nummular eczema may appear on the dorsa of the hands and the anterolateral aspects of the extremities. The lesions start as a group of vesicles rapidly becoming a brilliant red elevated circular oozing patch which undergoes involution by clearing in the center, extending peripherally until healing occurs, or the patches persist and enlarge until they may involve five or six inches (13 or 15 cm.) of the forearm or the entire dorsum of the hand.

PEDIATRICS

PENICILLIN: ITS USE IN PEDIATRICS. Wallace E. Herrell and Roger L. J. Kennedy, M.D., Rochester, Minn., *The Journal of Pediatrics,* December, 1944.

The authors say that "while sulfonamide compounds have played an important part in the treatment of certain bacterial infections of infants and children, their use is associated at times with well established and well-recognizable toxic effects. With the introduction of penicillin in the treatment of susceptible bacterial infections, it would appear that a new chapter is being written in the chemotherapy of diseases affecting not only adults but patients in the so-called pediatric age group. The established low toxicity of penicillin together with its high degree of antibacterial activity is, of course, its great advantage over most chemotherapeutic agents available up to the time of its introduction.

"Until the time of the preparation of this report penicillin has been used on the pediatric service at the Mayo Clinic in the treatment of fifty-four patients suffering from various types of bacterial infections in which the use of this agent was indicated. This experience forms the basis for the present report. In many of these cases sulfonamide compounds had been used and had failed."

DOSAGE AND METHODS OF ADMINISTRATION

"For the treatment of most bacterial infections of infants a total daily dose of 20,000 to 40,000 units of either the sodium or the calcium salt of penicillin appears to be adequate. For larger children, a total daily dose of 60,000 to 80,000 units is, as a rule, enough with the possible exception of cases of overwhelming sepsis, in which it may be desirable to use as much as 100,000 to 150,000 units.

For the local treatment of wounds involving soft tissues as well as bone, saline solutions containing 250 to 500 Oxford units of penicillin per cubic centimeter are suitable. Local applications to infected areas may be made repeatedly throughout the day or the solutions of penicillin may be kept in constant contact with these infected surfaces. Penicillin also may be administered locally in the form of the dry substance alone or in combination with sulfanilamide. These sulfanilamide-penicillin powders usually consist of a preparation containing 5,000 units of penicillin per gram of sulfanilamide. Penicillin powders usually consist of a preparation containing 5,000 units of penicillin per gram of sulfanilamide. Penicillin also may be administered locally as a cream containing as much as 250 units of penicillin per gram. For local therapy the calcium salt of penicillin is preferred to the sodium salt. In general, however, in the treatment of severe infections, best results are more likely to be obtained when local therapy is combined with systemic therapy than when it is used alone."

The authors' summary and conclusion give quite an accurate account of their experience as well as the practice and accepted usage of others and we quote them below:

"The results obtained following the use of penicillin in the treatment of a variety of bacterial infections in fifty-four cases in the pediatric age group have been reported. It appears that satisfactory results were obtained in forty-five of these fifty-four cases. It is evident, also, that the results obtained among children were as good as, if not somewhat better than, the results obtained after the use of penicillin in a comparable group of infections of adults. This is understandable in view of the fact that overwhelming infections such as bacteriemia and severe cellulitis carry, in general, higher morbidity and mortality rates when these diseases occur in the older age groups than when they occur among children. Penicillin had been used satisfactorily in the treatment of bacteriemia, severe cellulitis, acute osteomyelitis, meningitis, pulmonary suppurative disease, certain pyogenic skin infections, otitis media, actinomycosis, and a group of miscellaneous infections, including septic arthritis and ocular infections in children.

of miscellaneous infections, including septic arthritis and ocular infections in children..

"On the basis of our present knowledge, penicillin is of little or no value in the treatment of gram-negative bacillary infections including undulant fever, tularemia, influenza or infections owing to the colon-typhoid-dysentery group of organisms or to Friedlander's bacillus. Infections of the urinary tract due to the gram-negative organisms mentioned do not respond to penicillin therapy. Penicillin is of little or no value in the treatment of infections of the urinary tract owing to Streptococcus faecalis. Penicillin is of no value in the treatment of tuberculosis, acute rheumatic fever, rheumatoid arthritis, ulcerative colitis, malaria, or blastomycosis. Penicillin is likewise of no value in the treatment of leucemia as well as certain skin diseases including lupus erythematosus.

Penicillin possesses a distinct advantage over sulfonamide therapy in the treatment of infections of infants and children not only because of its greater antibacterial powers but also because of the extremely low incidence of toxic manifestations resulting from its use."

COMMENT:

"As penicillin has become less expensive and is much more easily obtained in good quantities, its use is fast becoming more general and in many instances is taking the place of or is used in connection with the sulfonamide drugs.. Its results in our hands in a number of cases that did not respond to the sulfonamide drugs have been in many cases, marvelous. However, we have used it combined with the sulfa drugs when they both failed when given alone. We would urge physicians to use penicillin more in pediatrics now that it is quite inexpensive and more easily obtained."

SURGERY

Sulfonamides in Appendicitis—A Review of 412 Consecutive Cases and an Analysis of Fatalities. Lewis R. Kaufman, M.D. and Walter L. Mershimer, M.D. The *American Journal of Surgery*, Vol. XLV, No. 3, page 303.

The authors feel that the mortality and morbidity incident to acute appendicitis makes this disease sufficiently important that surgical services must periodically review this subject. To that end the authors review and analyze the fatalities accompanying a series of 412 consecutive patients operated upon for appendicitis. The study was undertaken particularly to observe the results following the introduction of the sulfonamides administered by the usual route and by intraperitoneal instillation.

During the year 1936 103 patients having appendicitis with perforation of the appendix were operated upon with 23 deaths (22.3 per cent). Of the above group 54 were explored through a right rectus incision with a mortality rate of 27.6 per cent, while in 40 the McBurney approach was used, with a mortality rate of 16.6 per cent. The gross mortality for all cases of appendicitis from the hospitals referred to, prior to the introduction of sulfonamides, was 5.5 per cent.

From June 1940 to December 1941, the authors reported a series of 412 consecutive unselected cases in which appendectomy was performed with a gross mortality rate of 2.4 per cent. Intraperitoneal sulfonamides were first used by the authors in June 1940. They feel that the local use of sulfonamides permits concentration at the site of the infection, seventy-five to one hundred times greater than in the blood, and they feel that the bacteriostatic effect is enormously increased. Direct local application provides immediate control of infection and limits its spread. Nonetheless local use must often be supplemented by oral or parenteral administration.

It is concluded from a study of the cases reported that the local application of sulfonamides, chiefly sulfathiazole and sulfanilamide, renders the incidence of complications following surgery for suppurative appendicitis definitely less and that the mortality rate is sharply reduced. A lower mortality rate prevails if drainage in the presence of acute peritonitis is not used (although drainage must be employed in the presence of a localized abscess). It is felt that the McBurney incision reduces the mortality rate and that proper fluid balance by the administration of intravenous chlorides, plasma and blood are essential. All of the other measures, such as the administration of oxygen, the establishment of decompression by nasal intubation, etc., must be observed.

(Editor's Note: It is of interest that one of the earliest, if not the earliest, contribution on this subject was by Major J. Gordon Dees and appeared in the *Mississippi Doctor* in the year 1940.

State Board of Health

Felix J. Underwood, M.D.

MALARIA DIAGNOSIS*

by

Aimee Wilcox, Associate Protozoologist
Malaria Investigations
U. S. Public Health Service

I suppose that there has never been a time in the history of our nation when so many persons all over the country have been so interested in malaria as now. Although, in some sections of Mississippi, the disease has been prevalent enough through the years to keep up the interest of the people in those areas, the number of cases of malaria has decreased to such an extent in the past two or three years that I dare say few persons would now be greatly concerned if it were not for the problem of the returning service men, who have been scattered throughout the most malarious sections of the world and who will undoubtedly bring back to all parts of the state, as well as to every other state, a considerable number of cases of the disease. It behooves every doctor to be on the alert and every technician to be able to diagnose malaria quickly and accurately.

Through the years, various laboratory tests have been proposed and tried, and recently a great deal of work has been done on a serological test similar to the Wassermann. For a while, this latter test seemed to hold great promise, but I have the word of Dr. L. T. Coggeshall, who was one of the originators of the test, that in its present state it is of no essential value in the routine diagnosis of malaria. Perhaps after more work has been done on the purification of the antigen, when someone has succeeded in finding and separating the part of the parasite that causes the reaction, the test may be improved to a great extent and made generally usable. To date, however, the one means of definitely diagnosing malaria is by the demonstration of malaria parasites in stained blood films.

There are two types of blood films—the thin and the thick. The thin blood smear is well known, has been used for years by both doctors and technicians, and is sufficient where the infection is a heavy one. It is to the thin film that one must go to learn the various morphological differences of the species of the parasite and stages of each species. It is to the thin film that one must go to study the normal constituents of blood and its more frequent pathological changes in the presence of malaria before attempting to do thick films. The thin film is not sufficient for diagnosis, however, in many light or early infections or even in old chronic cases of malaria where the density of parasites is low, since, even with a prolonged search, no evidence of malaria can be found in many such cases.

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*Read before the Laboratory Section, Mississippi Public Health Association, Jackson, Mississippi, December 7, 1944.

The thick film, while not new, has not until recent years been very widely employed; and even now a great many technicians are not trained in its use. The Army and Navy have considered it valuable enough, however, that they have had many of their laboratory officers and enlisted men instructed in its use and the U. S. Public Health Service has given instruction to many classes of civilian technicians. As some of you know the thick film method is one of placing a large amount of unfixed blood in a small area on a slide and then staining the dried blood in an aqueous solution of Giemsa stain in such a manner that the hemoglobin is removed from the red cells, making it possible to examine microscopically by transmitted light the piled up mass of blood. Various investigators have estimated the amount of blood in one microscopical field of the thick film as anywhere from 10 to 50 times are great as in the thin film field. This estimation would, of course, depend entirely on the thickness of the individual blood film, and the thick film would give a theoretical advantage over the thin film in finding parasites in proportion to the amount of blood examined. Usually where a malarious patient is showing symptoms and has had no anti-malarial drug, parasites can be picked up in the thick film even when the density is no greater than 10 parasites per cu. mm. of film. The thick film, too, has the advantage of decreasing the examining time. Dr. Mark F. Boyd claims that "the examination of a thick smear for five minutes is roughly equivalent to the examination of a thin smear for fifteen minutes." I would give the thick film an even greater advantage in this respect.

Blood smears should be taken with the utmost care. It would be well to have both thick and thin film on each patient—particularly for the technician who is not yet familiar enough with thick films to use them in the diagnosis of species. Using the two smears together, the technician will find that she becomes less and less dependent on the thin film. Slides and the finger from which the blood is taken should be thoroughly clean. The thin smear should be very thin so that the cells do not overlap, and the thick film should be of such a thickness that the print can barely be read through it while it is wet. The smears should always be protected from insects and dust while drying, and the thick smear should be dried in a horizontal position so that the blood dries evenly and does not pile up and flake off. Slides stain best when they are moderately fresh. Even thick films can be stained as soon as visibly dry if they are handled carefully.

I have tried more than one rapid method of staining and have found some that are usable, even satisfactory, but in my hands no method has been so consistently good as the longer method staining, i. e.; one part of stock Giemsa stain solution and 50 parts of neutral distilled H_2O with a staining time of 45 minutes followed by dipping the thin film once or twice in neutral distilled H_2O and letting the thick film stand for three minutes in the same water. The water is buffered to the neutral point with two M/15 sodium salt solutions and the stain used must be one that has been tested on malaria parasites in the thick film. There are many Giemsa stains on the American market that are not satisfactory for staining malaria. The Giemsa stain which I prefer is that manufactured by the National Aniline Division of the Allied Chemical and Dye Corporation of New York. In ordering, one should specify a solution made from a recently certified lot of dye.

Due to the fact that falciparum malaria frequently terminates fatally in a very short period of time, I think that it is very important that every technician be able to differentiate species of malaria and should include the species identification in the report to the doctor. Practice and experience are necessary before one becomes really proficient in malaria diagnosis; but the more positive slides one sees, the less difficulty one encounters in recognizing and differentiating species and the more pleasant and interesting the task becomes.

PREVALENCE OF COMMUNICABLE DISEASES IN MISSISSIPPI

	Dec. 1944	Dec. 1943	Dec.-5 yr. avg.
Acute poliomyelitis	4	2	3.0
Bacillary dysentery	441	310	318.0
Dengue	0	0	0.0
Diphtheria	54	18	4.4
Influenza	6462	37658	14721.4
Measles	164	318	400.0
Meningococcus meningitis	11	21	10.4
Other forms meningitis	4	8	4.8
Pellagra	141	162	171.6
Pneumonia	1722	2920	1709.0
Pulmonary tuberculosis	111	127	109.8
Scarlet fever	118	46	84.6
Smallpox	0	0	1.0
Tularemia	4	5	3.5
Typhoid fever	4	4	4.0
Typhus fever	20	11	9.2
Undulant fever	2	4	2.0
Whooping cough	483	713	653.8

The public health and social benefits resulting from the hospitalization of infectious cases of tuberculosis are not sufficiently recognized. These social benefits need greater emphasis and the question of the individual's ability should be subordinated to the more fundamental consideration of the public welfare. —Tuberculosis Clip Sheet.

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FROM OUR PRESIDENT

Greetings:

With so short a period left in which to accomplish many worth while projects, I want to urge officers, councilors, chairmen of committees, and members to work harder for the benefit and growth of our auxiliary.

During the months that I have served you as president it has been my pleasure to visit a number of auxiliaries in the state. In November I was the guest of Clarksdale and Six Counties, in December the Northeast Mississippi and Thirteen Counties Auxiliary and in February the Central Medical Auxiliary and the Harrison-Stone-Hancock Auxiliary.

At the First Conference of State Presidents, Presidents-Elect, Chairmen of Standing Committees, and Directors held in Chicago, November 16 and 17, 1944, you were represented by Mrs. V. B. Philpot of Tupelo, a director of whom we are very proud, Mrs. Stanley Hill, president-elect, of Corinth, and your president. This was an important event and Mississippi was fortunate in having three representatives. The enthusiasm and inspiration that I have received from these associations are a source of great joy and satisfaction.

Every doctor's wife will receive a letter urging her to become an auxiliary member. It is a privilege to have a right to membership in this great organization and yet so many of our doctors' wives have not fulfilled one of the most important obligations—to become a member of the Woman's Auxiliary to the Mississippi State Medical Association.

Believing in your loyalty and desire to see the auxiliary progress, I feel that it will only be necessary to bring the importance of membership to your attention in order to enlist your support and interest. Your help is needed. It is your responsibility to accept the right and privilege to membership. The requirements and standards are high and you possess the qualifications that make you eligible. You can become a part of a group of women who have been drawn closer by a bond of friendship and fellowship, and an eagerness and desire for greater service.

In number there is strength. With the uncertainty of the days ahead, let us unite in an increased membership to meet the problems that face us.

ANNE J. CLARK
President of Woman's Auxiliary

MRS. LAWRENCE CLARK, STATE PRESIDENT, IS CENTRAL AUXILIARY GUEST

Mrs. Lawrence Clark of Vicksburg, state president, was the guest of honor at the meeting of the Central Medical Auxiliary in Jackson in the Red Cross rooms on the fairground. Mrs. Clark brought an inspiring message to the group, expressing her interest in a health and educational program and urging the local members to subscribe to the *Bulletin* and *Hygeia.* She commended the auxiliary on the work the members are doing for the Red Cross.

The auxiliary met in the morning to make surgical dressings for Foster General hospital and the meeting was opened with prayer by Mrs. H. C. Sheffield.

Luncheon was served in the canteen, after which the members reassembled, and Mrs. W. R. Bethea, local president, introduced the state president. Mrs. Carter O'Ferrall presented Dr. Frances Brennecke, orthopedist, who was also a guest of the auxiliary, and gave an interesting and informative talk about polio and the clinic in Jackson.

Besides the guests, the following were present: Mrs. John Harter, Mrs. Ray Biggs, and Mrs. C. C. Smith, Sanatorium; Mrs. Carter Lipscomb, Mrs. Peyton Greaves, Mrs. W. R. Bethea, Mrs. Adna Wilde, all of Jackson; Mrs. T. B. Holloman, Florence; Mrs. A. L. Gray, Mrs. H. C. Ricks, Mrs. B. N. Walker, Mrs. C. B. Mitchell, Mrs. I. C. Huggins, Mrs. Hardie Hays, Mrs. H. C. Sheffield, Jackson; Mrs. I. B. Trapp, Brandon; Mrs. W. C. Thompson, Mrs. J. T. Weeks and Mrs. Temple Moore, Jackson.

Deaths

DR. A. M. McCAULEY

Dr. A. M. McCauley, 66, Byhalia physician, died in his home there after a short illness.

A graduate of what is now the University of Tennessee College of Medicine in Memphis, Dr. McCauley was also a county political, civic and religious leader.

Survivors include his widow, a son, two daughters, one brother, three sisters.

Funeral services were conducted at Byhalia, burial at Holly Springs.

DR. D. J. MURPHY

Funeral services were held December 1 at Vaiden for Dr. Daniel Jackson Murphy, 64, who died of a heart attack while on a business trip to Jackson.

Dr. Murphy was born and reared near Vaiden, the son of the late William A. Murphy and his wife, Mrs. Rosie Strahan Murphy, pioneer settlers of Attala County. He was a graduate of the University of Mississippi. He was a practicing physician for many years.

Dr. Murphy first married Miss Sallie Williams. Their two sons are Ben Murphy in U. S. service in New York and Alexander Murphy in U. S. service in Australia.

His second marriage was to Miss Ida Harvey, who with the following daughters, survive him: Mrs. H. L. Shelton, Winona; Mrs. Eris McLellan, Greenville; Miss Annie Laurie Murphy, Jackson. Surviving also are two grandchildren.

DR. C. S. HYLAND

Funeral services were held December 23 for Dr. C. S. Hyland of Yokena.

Dr. Hyland was the last of the pioneer members of the Hyland family who had been prominent in southern Warren County for many decades. He typified the American concept of the country doctor—kindly, accomodating and genteel, a leader in community and church and a counsellor in the affairs of his constituents.

He was born at the old antebellum Hyland home in Yokena, was graduated from Tulane University in 1891, and practiced medicine in the Yokena community until his retirement a few years ago. In 1941, he and the late Mrs. Hyland celebrated their golden wedding anniversary. He was a member of the Presbyterian church at Yokena, and of the Hyland Masonic Lodge at Grange Hall.

Dr. Hyland is survived by four daughters, Mrs. Wood Brown of New Orleans; Mrs. A. G. Alexander and Mrs. B. C. Owens of Yokena, and Mrs. Lyle Andrews of Vicksburg. Eight grandchildren, a niece and nephew also survive.

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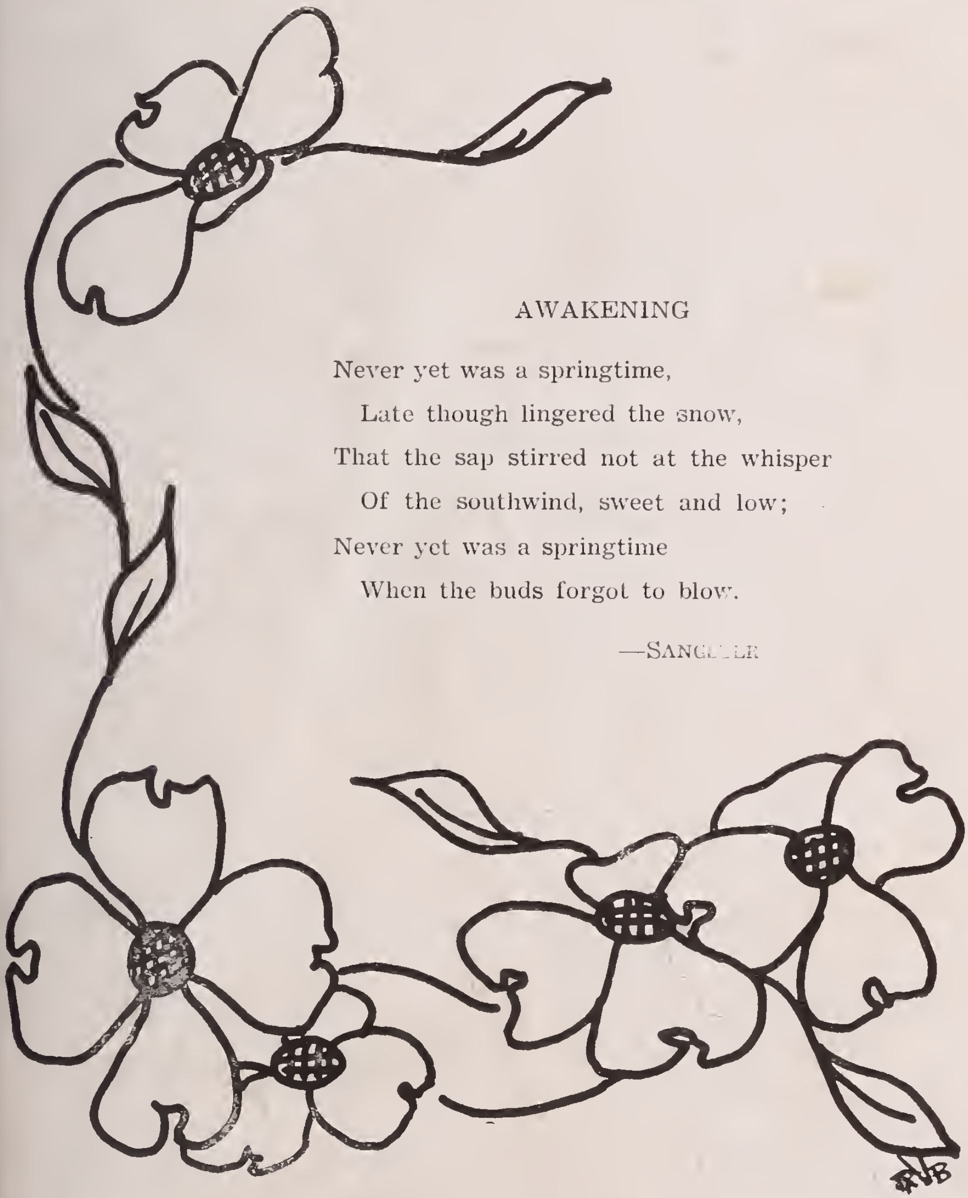

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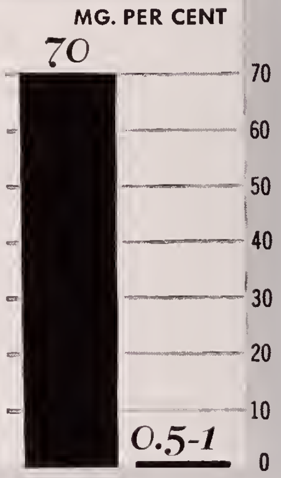

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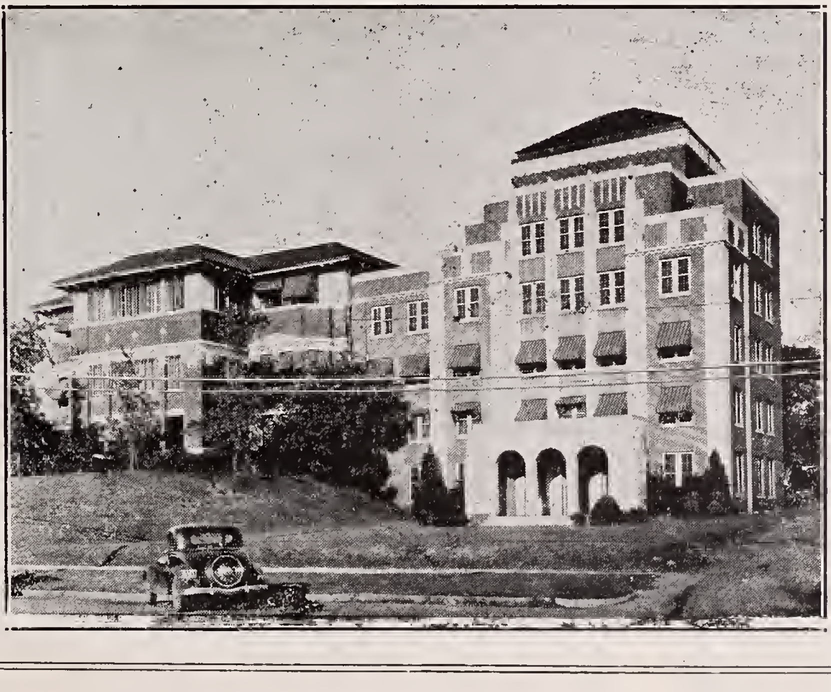

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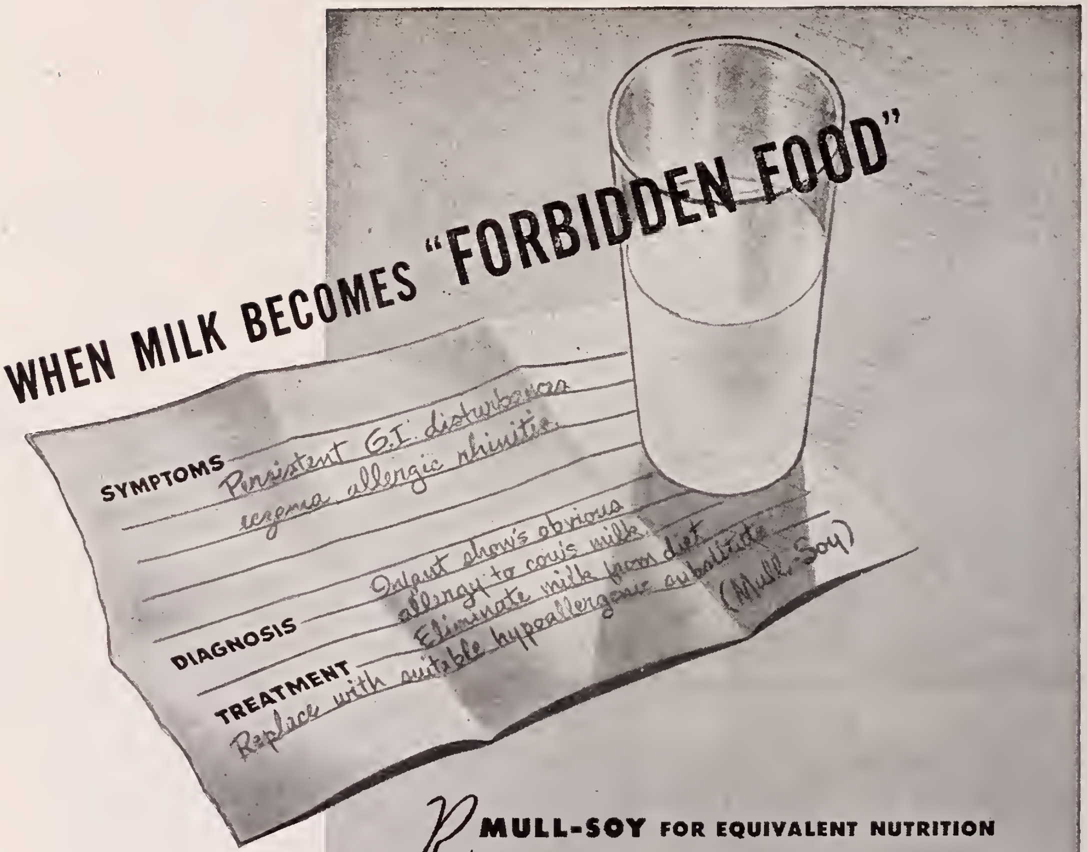

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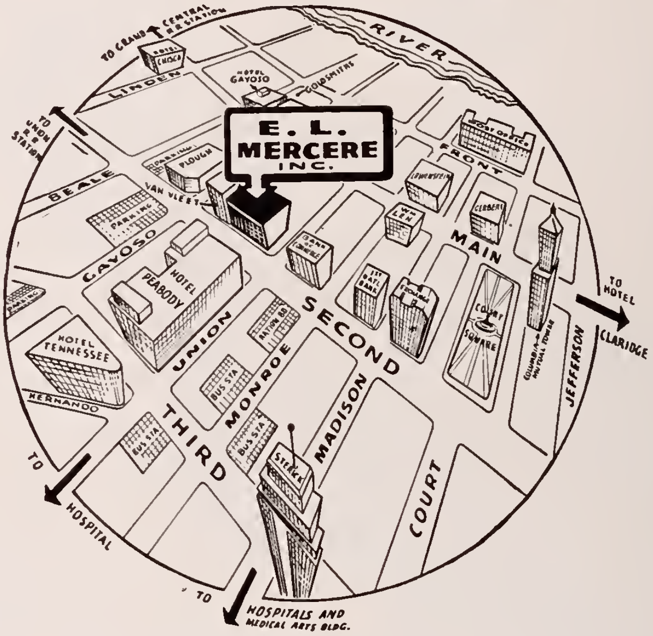
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[1] Am. J. Dis. Child. 66:1 (July) 1943.

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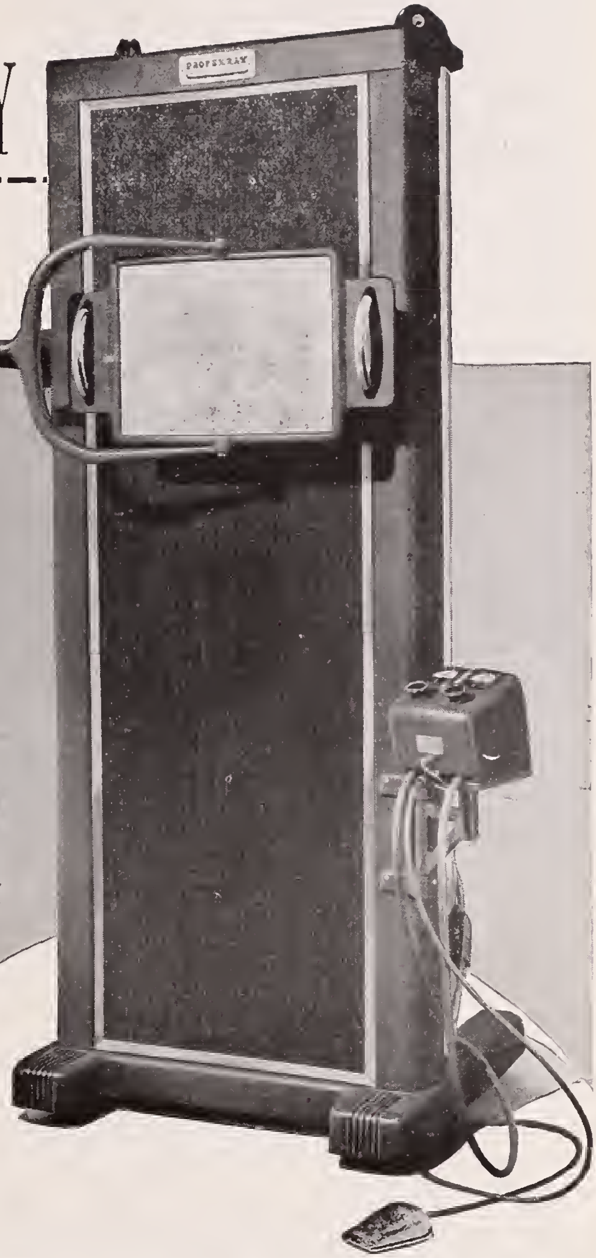

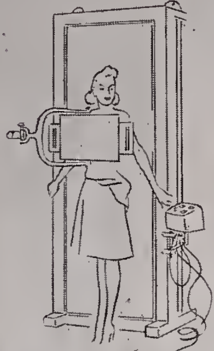

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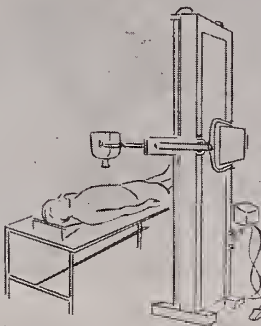

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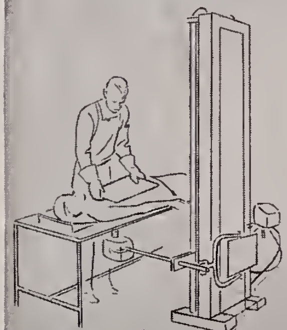

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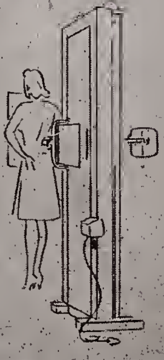

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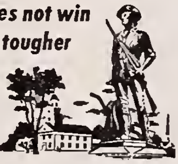

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Public Health Activities of American Red Cross in Mississippi*

A. E. HARDISON, M.D., M.P.H.,

Area Medical Director, American Red Cross,

Atlanta, Ga.

THIS PAPER DOES not propose to describe in any detail the numerous activities which have public health and medical aspects as conducted by American Red Cross in the state of Mississippi. It is more an attempt to delineate briefly the broad medical and health policies of the organization applicable not only to Mississippi but to all other states in the country as well, with some emphasis placed upon the public health phase of disaster relief in Mississippi.

By virtue of its congressional charter, the American Red Cross has been actively engaged in certain phases of medical and health work for many years. In 1922 the Central Committee of the organization felt that the character and extent of Red Cross medical and health work should be considered by outstanding men in the medical and public health fields. After giving the subject full consideration, that Committee unanimously adopted a report suggesting for the Red Cross a definite and constructive medical and health program.

From 1922 to 1939 many changes occurred in the Red Cross program and in the activities and functions of other agencies. While the acceptance of increased responsibility for public health activities by governmental agencies—federal, state, and local—undoubtedly lessened the need for Red Cross service in some fields, the expansion of Red Cross responsibility in other directions brought new questions concerning program, policies and organization in those phases of Red Cross work having medical and health aspects.

In 1939 a National Medical and Health Advisory Committee was appointed by the chairman to advise him concerning the medical and health aspects of Red Cross programs and to promote effective relationships between the American Red Cross and the medical profession. Official governmental medical and health agencies are represented on the committee by the Surgeons General of the Army, the Navy, and the United States Public Health Service, and by the Associate Chief of the Children's Bureau. Other committee members represent medical practice, public health administration, medical teaching and medical research. Through the use of this advisory committee, the American Red Cross is able to adjust the medical and health aspects of its programs to present-day developments in the broad fields of medicine and public health.

Red Cross has made contributions of fundamental importance to the cause of public health through its disaster relief work, its public health nursing services, its courses of instruction in first aid, water safety, accident prevention, home nursing, and nutrition; through promotion of positive health to millions of youths by Junior Red Cross; and through leadership in the development of cooperative organization for public health activities. Red Cross chapters have in the past established or assisted in the establishment of public health nursing services in more than half of the 3,070 counties in the United States. More than ten million certificates have been issued to students in Red Cross classes in first aid, water safety, and home nursing. Assistance, when needed, has been rendered to various states in times of major epidemics.

Today, the activities of the American Red Cross are focused on meeting the demands of service to the armed forces and their families. One of the major, wartime activities of the organization from a medical viewpoint is the collection and processing of human blood for the armed forces. To date, about six million units of plasma have been prepared. Another vital responsibility is the recruitment of graduate nurses for the armed forces. Already, about 40,000 nurses have been recruited by Red Cross Nursing Service and it is expected that more than 11,000 will be needed in the near future.

However, the usual peacetime programs

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*Read before the Section on Hygiene and Public Health at the annual meeting of the Mississippi State Medical Association, May 10, 1944, Jackson, Miss.

of the organization are not being neglected, but in general are accelerated due to circumstances connected with the war effort. One of the major peacetime functions of Red Cross is disaster relief. For sixty-three years this organization has been the official relief agency of the government and of the people to provide relief in disaster. Since the state of Mississippi during the past several years has been affected by numerous disasters, particularly floods and tornadoes, and since the medical and public health phases of Red Cross work have been forcefully demonstrated in this field of activity, further discussion will be limited mainly to this subject.

During the twenty-year period ending June 30, 1940, Mississippi ranked as the second state in the nation in the number of disasters requiring American Red Cross assistance. The ninety-three significant disasters occurring during this period included one hurricane, fifty-four tornadoes, three storms of other types, twenty-one floods, six fires including forest fires, and eight other types of disaster.

A more recent study indicates that during the twenty-year period, 1924-1943, there were sixty-three distinct tornadoes in the state of Mississippi, or an approximate average of three tornadoes per year. Sixty-five counties in the state were hit at least once during this period and a large number of counties was hit three or more times. A total of 28,050 people affected by these tornadoes was assisted by American Red Cross.

The devastation wreaked by tornadoes in this state is well known. For instance, in the Southern tornadoes of 1942, Mississippi was unusually hard hit. With the exception of Baldwyn, Meridian and Grenada, the areas affected in the state were rural and thinly populated. In Baldwyn and Grenada, there was heavy loss in lives and property. Six hundred and seventy-two persons were injured, 149 hospitalized and seventy-nine killed in the fifteen counties affected. A summary of the number of injured, hospitalized and dead in this tornado as shown in Table I illustrates the extent of medical problems that may be created by one tornado.

Table I.

Number Persons in Mississippi injured, Hospitalized, and Dead as Result of Southern Tornadoes of 1942.

County	Inj.	Hosp.	Dead
Tupelo Area, Lee, Prentiss, Pontotoc	107	36	8
Leflore	173	60	31
Carroll	23		5
Grenada	100		3
Tallahatchie	30	21	3
Yalobusha	100	50	16
Lafayette	40	10	5
Marshall	18	2	1
Benton	35	20	6
Winston	9		
Leake	3		1
Lauderdale	8		
Jefferson Davis	26		
Total	672	149	79

Physical injuries to victims inflicted by tornado disaster vary from abrasions and lacerations to the most severe internal injuries and fractures. Fractures of skull, vertebrae, and pelvis and compound fractures of long bones are common.

When American Red Cross assumes responsibility for medical care of disaster victims, this responsibility usually is maintaned until the patient requires no further medical or nursing care. Often it happens that Red Cross may be responsible for cases over a period of years unless the case is such that it can be handled by a public agency. In order to illustrate the type of cases carried by Red Cross on a long term basis, brief outlines of two of several in Mississippi still under Red Cross medical care are presented:

CASE I. Mrs. B. M., white female, was twenty-three years of age in 1936 when injured by a tornado. Diagnosis was compound fracture of lower end of left tibia and dislocation of ankle joint followed by osteomyelitis of lower end of tibia. Arrangement was made by Red Cross Medical Service for treatment by a local physician in a local hospital. After an initial period of hospitalization of several weeks in 1936, she returned home. Since that time she has been hospitalized on several occasions in Mississippi and in Memphis. In 1942, is was thought that she had improved to such an extent that Red Cross medical aid would no longer be needed. However, a few weeks ago, it was learned that the ankle is again giving her considerable trouble. It is likely that hospitalization will again be necessary.

CASE II. R. D., white female, was five years of age in 1936 when injured by a tornado. Her injuries included an incomplete fracture of the skull, compound comminuted fracture of the lower third of the right tibia and fibula, fracture of middle third of left femur and badly mutilated wound of left leg. The right leg was amputated below the knee during the initial hospitalization period. As late as March, 1944, she was requiring medical care. The Red Cross and public agencies are coöperating in furnishing her medical and welfare needs, including artificial limbs.

Although Red Cross organizes and directs medical, dental and nursing activities in disaster, it should be stressed at this point that the Red Cross Service does not substitute for that of local physicians, dentists and nurses but supplements same. The primary responsibility for the care of the sick and injured rests with the local physicians. Every effort is made to maintain and reëstablish as quickly as possible the predisaster relationships between physicians and their patients.

Red Cross medical assistance is intended only for those who are ill or injured because of the disaster, or whose condition is aggravated by the disaster, and who are unable to obtain care because of lack of resources. Exceptions may be made in certain emergencies, obstetrics for example, when medical service is not otherwise available. It is well understood that the supervision of the public health in disaster areas and the provisions of necessary biologicals are primary responsibilities of state and local health departments. American Red Cross maintains and furnishes supplies of human blood plasma as needed for disaster victims.

Throughout the history of Red Cross medical and health work in Mississippi, private practitioners, and state and local health officials have at all times coöperated, whether in emergency or during the normal program. Their good will and constant assistance have been most gratifying, and have facilitated tremendously the work of the American Red Cross.

Measures Which Inhibit the Formation of Urinary Calculi*

TEMPLE AINSWORTH, M.D.

Jackson, Mississippi

IN SPITE OF the volume of work that has been and is being done, our knowledge of the stone problem is as yet inadequate. There is much confusion and most of the workers disagree on important points. But many factors which favor urinary stone formation are known and, by the elimination of these in patients who have had urinary calculi, the rate of recurrence can be materially reduced.

Mention should be made of the frequency of occurrence of stones in certain places, the so-called stone districts. The most important of these are the valley of the Volga River, Mesopotamia, and the vicinity of Canton in South China. It has been suggested that this geographic distribution might be explained by the soil, drinking water, climate or diet. The soil, drinking water and climate offer no common explanation as they vary considerably in the different areas. Diet does not seem to be a factor and will be discussed later. Stones occur most frequently between the ages of thirty and fifty years and occur very infrequently among the negro race. Time will not permit a discussion of all the theories which have been advanced relative to the formation of stones. A few of the most widely accepted theories are:

1. Urinary stasis. When urine becomes chronically impounded behind an obstruction, chemical decomposition takes place and various salts are liberated. If a nucleus is present, stone formation may begin.

2. Urinary tract infection, especially with urea splitting organisms.

3. Focal infections. Rosenow and Meisser[1] were able to produce renal stones in a high percentage of their experimental dogs by devitalizing the teeth of the dogs and implanting the pulp canals with organisms obtained from the urine and from foci of infection of patients who harbored renal calculi.

4. Vitamin A deficiency or vitamin D excess. Rats fed on diets deficient in vitamin A rapidly form stones in their urinary tract. In human stone formation, the evidence in favor of vitamin A deficiency is not convincing.

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*Read before the Section on Medicine at the annual meeting of the Mississippi State Medical Association, May 10, 1944, Jackson, Miss.

Vitamin D excess may produce hypercalcinuria.

5. Changes in hydrogen-ion concentration of the urine. Certain crystals are more soluble in alkaline urine, whereas others are more soluble in acid urine.

6. Changes in the colloids in the urine. The colloids in the urine may be broken up by bacterial action or pathologic changes in renal secreting apparatus. This change in surface tension permits urinary salts to fall out of solution.

7. Increased urinary excretion of crystalloids. Hypercretion of uric acid or cystine is due to an abnormality of protein and purine metabolism.

8. Hyperparathyroidism. This condition causes hypercalcinuria.

9. Randall's hypothesis of calcium plaques. He postulated that the basic factor initiating the development of a primary calculus is a small ulcerative lesion situated on a papilla and upon this raw surface, urinary salts are precipitated and coalesce according to colloidal chemical theory.

10. Prolonged immobilization of the body as in fracture of the spine. Orthopedic surgeons have long recognized that stones frequently occur in patients subjected to long periods of complete immobilization. This is probably due to an increase in urinary excretion of calcium secondary to a demineralization of bone and stasis of urinary tract because of the recumbent position.

11. Sulfonamide drugs. Most of these drugs are excreted in the urine in their relatively insoluble acetylated forms. Precipitation of crystals may occur in the urine of patients taking these drugs.

The dissolution of urinary calculi is an interesting subject. Many investigators have tried by various methods to dissolve stones in the urinary tract. Recently Suby[2] and coworkers reported twenty cases in which their Solution G, made up as follows:

citric acid (monohydrous)	32.3 grams
magnesium oxide (anhydrous	3.8 grams
sodium bicarbonate (anhydrous)	4.4 grams
distilled water qs	1000 cc.

was used successfully for partial or complete dissolution of bladder and renal calculi. This was used as a continuous drip irrigation of bladder or kidney pelvis. I have used this solution with success in one case. Cystine and urate stones may undergo dissolution by alkaline diets and alkaline lavage. Phosphate and carbonate stones may be dissolved by urinary acidification and acid lavage. I have tried to dissolve many urinary calculi but most of my efforts have met with failure.

The proper treatment of urinary calculus formation involves not only the removal of the stone but also the prevention of recurrent stone formation. Many patients pass stones or have them removed by surgical or cystoscopic means and are given no advice as to how they may prevent a recurrence. No treatment is certainly bad treatment when you consider that one out of every five persons with stones will have a recurrence if preventive therapy is not instituted but, with proper therapy, this incidence may be decreased to one in twenty-five presons. I am using the following plan of treatment which I believe definitely inhibits the formation of urinary calculi.

1. To avoid pseudo-recurrence when removing multiple stones or a branching stone, x-ray checkup during the operation is of great value to prevent a small stone from being left behind.

2. Urograms are made to determine if there is any evidence of stasis in urinary tract. Any obstruction must be removed and proper drainage established.

3. Patient should return each six months for two years for K. B. B. x-ray study of urinary tract.

4. Infections of the urinary tract must be eradicated. Most infections produce an alkaline urine which tends to precipitate calcium phosphate and calcium carbonate and thus produce a recurrent calcium stone, even though the original stone may have been of uric acid or cystine. The measures taken to control infection are a) irrigation of urinary tract with sulfonamide or other antiseptic solutions; and b) the oral administration of mandelic acid or sulfonamide derivatives.

5. Clear up such foci of infection as tonsils, teeth, prostate, gall bladder, etc., if possible.

6. Make urinalysis every three months with special reference to microscopic sediment.

7. Advise patient to drink plenty of water. Increasing the volume of urine is one of the easiest and most effective methods of decreasing the tendency of precipitation of many of the solutes. The amount of calcium in the water seems to make little difference; for instance, in Canton, China, the incidence of stones is considerable and the water is soft; in Switzerland, stones are rare but the water

is very hard. In other areas, the hardness or softness of the water bears no relationship to the number of persons with urinary calculi.

8. Examine twenty-four-hour urine specimen for quantitative calcium determination and repeat every six months. Sulkowitch has devised a simple test which is performed as follows: To 5 cc. of oxalate buffer mixture (2.5 gms. of oxalic acid, 2.5 gms. ammonium oxalate, 5 cc. of glacial acetic acid and distilled water q. s. to make 150 cc.) an equal amount of urine is added which, if not acid, should be acidified with 50 per cent acetic acid. In using the test, it is necessary that such drugs as ammonium chloride, sodium acid phosphate, sulfanilamide, sulfapyridine, and sulfathiazole be discontinued, and the high calcium foods, such as milk and cheese should be eliminated.

INTERPRETATION: The turbidity produced

—no precipitate at end of two minutes, no calcium.

—a fine white cloud, small amount of calcium.

—a moderately dense white cloud, moderate to large amount of calcium.

—an extremely dense white cloud, having an appearance resembling milk, and appearing almost immediately after the addition of the reagent, even after the mixture is shaken, very large amount of calcium.

If urine shows a large amount of calcium, the blood calcium and blood phosphorus should then be done. Hypercalcinuria may be found in hyperparathyroidism, menopausal osteoporosis, Cushing's syndrome, and in patients confined in bed for long periods of time. The bony changes in the above conditions should be studied by x-ray. Hypercalcinuria, due to parathyroid adenoma, may be controlled by removing the adenoma, but in other cases, the whole thing that may be done is maintenance of large urine output so concentration of calcium in the urine is lower.

9. Test urine for cystine. Technic for cystine in urine: To 5 cc. of urine made alkaline with ammonium hydroxide, 2 cc. of 5% sodium cyanide solution is added and allowed to stand for five to ten minutes. A few drops of a freshly prepared 5% sodium nitro prusside is then added. In the presence of cystine, a permanent deep purplish red develops.

10. Give rather large dose of vitamin A for its specific effect on epithelial structure although it has not been proved that deficiency of vitamin A is an important factor in stone formation in man. Vitamin B is prescribed for its influence on nerve and carbohydrate metabolism.

11. Make a qualitative chemical analysis of the stones. The patient's diet is regulated according to the composition of the stone. If a stone is not available for analysis, the diet is determined by the pH of the urine and the crystals and sediment in the urine. If the stone is composed of phosphates or carbonates, an acid ash diet and acidifying drugs are used to shift pH of the urine to acid side in order that these salts may be maintained in solution. In the presence of urinary tract infection, an acid ash diet is contraindicated because no change in the pH is obtained and increased urinary calcium excretion is induced.

In the presence of cystine, uric acid or xanthine stones, the alkaline ash diet and alkalinizing drugs are prescribed. When the pH of the urine has been shifted to the alkaline side, we must be certain that the phosphates and carbonates are not being precipitated in the urine. The patient may easily test the pH of urine with nitrozine paper.

Oxalate stones may occur in neutral, acid or alkaline urine. Therefore, the precipitation of oxalates may be controlled by the restriction of foods with a high oxalic acid content.

How to deal with laminated stones where urates, phosphates and oxalates are preponderant in various layers, is an unanswerable problem.

12. Patients who are bedridden for long periods should have the position of their body changed frequently to prevent one set of calices from being persistently in a dependent position. Their urine should be kept acid by drugs or diet and a large urinary output should me maintained.

13. Crystallization of sulfonamide drugs in urine are not apt to occur if urine is kept alkaline and urinary output is adequate. Last year, before this Association, I presented the case histories of several patients with urinary tract obstruction due to sulfonamide drugs. I refer you to the March, 1944 issue of the *Mississippi Doctor* for a review of this subject.

In conclusion, if any of you have a patient who has been having recurring renal calculi and you are able to prevent such a recurrence, he or she will be forever grateful to you.

Summary

1. Some of the factors which favor urinary stone formation are presented.

2. The dissolution of urinary calculi is discussed briefly.

3. Presentation is given of a plan of treatment which I believe definitely inhibits the formation of urinary calculi.

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Blindness in Mississippi[*]

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The thought for this paper was inspired by observing the energy and enthusiasm displayed by welfare workers and friends who bring in patients for examination to obtain the pensions paid the blind, and the almost utter lack of any effort on the part of the welfare worker, friends, or patients to do anything before blindness has progressed to the last stages. Somebody is to blame for any case of preventable blindness. It is true in most cases that this is due to ignorance on the part of the patient in not seeking aid sooner. The general practitioner and the public should be educated to seek aid in eye trouble early, and it is the place of the ophthalmologists to lead and organize this movement.

The economic handicap of blindness is too apparent to dwell upon. I had expected to give you some statistics on the number of blind in Mississippi, but the only information I was able to obtain is that 1,387 needy blind are drawing pensions. According to a survey made by the National Health Survey in 1935-36 over the whole country covering 2,500,000, there were per 100,000 persons, 83 blind in both eyes, 326 blind in one eye, making a total blind in one or both eyes, 409 per 100,000. On this basis there would be 1660 cases of blindness in both eyes, and 8180 cases of blindness in one eye in Mississippi. This survey showed that the rate in the Negro is double that in the white race, being 146 per 100,000 against 76. I have no way to check these figures, but it is my impression that they are far too low for Misssissippi.

Briefly noted are a few of the causes of blindness which are almost daily seen.

Amblyopia ex anopsia. This is one of the most common causes of blindness in one eye, due to the fact that there is a too prevalent idea that cross-eyed children will outgrow the condition, or that nothing can be done until the child starts to school. If these cases were sent to the ophthalmologist at the age of two years or sooner, a large number of these eyes could be saved.

It should not be necessary to speak of conjunctivitis, corneal ulcers, or interstitial keratitis, but blindness from these is not uncommon.

Neglect of pterygia, especially in the old patients, is a very common cause of blindness in my section.

Uveitis is often neglected until too late.

Glaucoma, especially the simple, is one of the most difficult to get early enough to save useful vision. As we know, it is much more common in the Negro. Too often the patient never appears for examination until he has completely lost all vision.

The Committee on Definition of Blindness, Section of Ophthalmology, A. M. A., recommended the following definitions for grades of blindness:

1. Total blindness—inability to perceive light.
2. Economic blindness—inability to do any kind of work for which sight is essential. This is accepted as 20/200 or less

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[*] Read before the Section on Eye, Ear, Nose and Throat at the Mississippi State Medical Association May 9, 1944, Jackson, Miss.

with best possible correction, or as an equally disabling loss of visual field.

3. Vocational blindness—impairment of the vision that makes it impossible for a person to do work at which he had previously earned a living. This may vary from 20/200 to 20/60, depending on the occupation.
4. Educational blindness—is such loss of sight as makes it difficult to learn by the methods that are commonly used in schools. This is more than 20/200 and less than 20/70.

A program for the care and prevention of blindness in this state should include a survey of those with impaired vision. This could easily be included in the school examinations, and there should be a follow-up system to see that the children get proper attention. There should be a state-wide system so that those who are unable to pay for proper medical attention could have this attention early.

The general practitioner should be encouraged to refer all cases of impaired vision and eye trouble for early examination.

The public should learn that not all eye trouble can be relieved by glasses, and that the fitting of glasses is only a part of an eye examination.

This paper has only briefly touched on the problems of blindness in Mississippi, but it is my hope that it will stimulate more interest by the ophthalmologist, the general practitioner, and the public health department in the prevention of blindness.

DISCUSSION

Dr. M. L. Batson (Jackson)—Mankind's efficiency depends on the most precious sense, vision. One of the greatest tragedies that can befall the human being is to lose his sense of vision, although a great many people succeed in life despite this handicap. Blindness has been present in the human race for centuries. We read in the Bible that when Isaac was old his eyes were dim, and other biblical descriptions of failing eyesight may have been referred to glaucoma, although cataracts were responsible in many cases.

Sight is the prime basis of most of the arts of science of communication, also seeing is believing against the evidence of touch or hearing. Without word our world falls to pieces, and the average person can think of no worse fate than to be blind. Yet, Homer was blind and also Milton. Nelson won the battle of Trafalgar with only one eye and Theodore Roosevelt, half blind, led his Rough Riders up San Juan Hill with this pockets stuffed with spare spectacles.

Paradoxically, we do not see with our eyes at all, but with our brain. The eye is merely the device which turns light into little electric currents. Without the brain, images are as useless as an undeveloped film.

In glaucoma the eyeball becomes very hard. This fact has been recorded by numerous writers. William McKenzie remarked that the eyeball feels firmer than normal. This disorder is one of the principal sources of blindness and is characterized by pain in and about the eye. There is a marked decrease in vision and if untreated the result is permanent and complete blindness. Early diagnosis in glaucoma is paramount. I think that every physician should be on the alert and make a careful examination of every eye condition to try to find the first symptom of glaucoma. If the diagnosis is made early and treatment begun, either medical or surgical, the chances of retaining a normal vision is much better.

It is my opinion that almost every case of glaucoma is surgical. By doing a trephine, or the operation which I prefer, iridenclesis, in the early stages,you may save the eye. An iridenclesis is performed by dissecting the conjunctiva up to the limbus and then making a keretome incision. Grasp the iris, bring it down to the opening, incise it with scissors and incarcerate it in the opening. After this is finished, make your closure with a fine silk suture in the conjunctiva.

I believe that our commonwealth should put on a program for the prevention of blindness. If the public were enlightened as to the hazards of industrial injuries and the various diseases, they may be on the alert and take proper precautions, and able to prevent many cases of total blindness.

It is my opinion that congenital blindness is due to a lack of vitamins with mothers during the period of gestation. If they were enlightened regarding the relation of diet to vision, there would be less congenital blindness among babies.

Report of Case of Serious Burns*

and
Consideration of the Problem of Reconstructive Surgery

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A. T., A WHITE girl, aged 5 years, about 12 o'clock noon, on February 24, 1944, received extensive burns of her back, after her clothing caught fire from playing in a grass fire, and running home with her clothes ablaze. She was brought to my office about 15 minutes later where she was given morphine gr. 1/12 to control the pain and admitted to the South Mississippi Infirmary soon after the injury.

On examination she was found to have a second and third degree burn involving about 35 per cent of the total skin area. There was practically total destruction of the skin of the back, extending from the lower angles of the scapulae down to the knees and three-fourths around the body.

General treatment consisted of morphine to control pain and shock, parenteral administration of blood plasma to control hemoconcentration. (Figure I shows graph of the hematocrit and the amount, time of administration and effect of plasma given), the systemic use of sulfonamide drugs to inhibit infection, tetanus antitoxin, 1500 units, adequate fluids with high protein diet, tonics of liver extract and iron, and multiple vitamins. With this treatment, no whole blood transfusions were necessary.

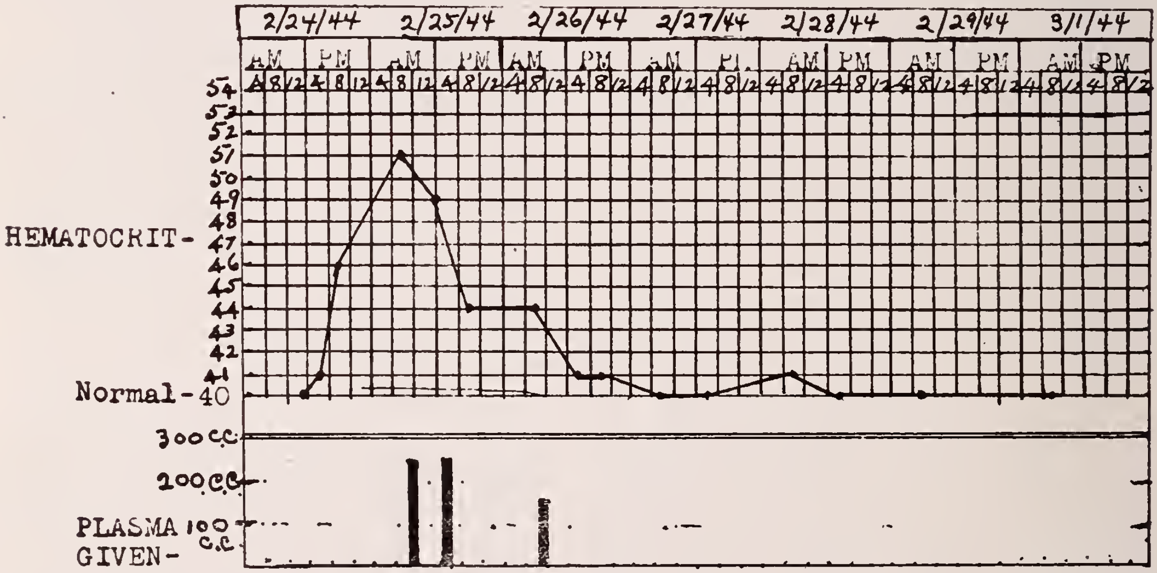

Figure I. Graph showing degree of packed whole blood cell concentration (hematocrit) produced by the burn and the amount, time of administration, and effect of the plasma given. Note that 250 cc. of plasma in this child is equivalent to 1000 cc. in an adult.

Local treatment of the burned area consisted of thoroughly cleansing with ether and removal of all the dead skin, after which patient was placed under a heat tent in the prone position and the burned area covered with sterile gauze kept moist with sterile normal saline solution containing zephiran chloride 1:10,000. Gauze was changed often to prevent sticking to the burn. The wound was kept clinically clean and infection prevented with this method. Patient was placed on thick pillows with a basin under the pubic region, for collection of the excreta. Pressure dressings were not used because the fine meshed gauze and sterile mechanics waste were not available at the time.

In addition to the above measures, the excellent nursing care which the child received on the part of the mother, who is a graduate nurse, contributed very greatly to the good results obtained.

PROGRESS AND RECONSTRUCTIVE SURGERY

During the first week, the patient ran a marked febrile course, the temperature averaging about 103 degrees with pulse of 130 to 140, and respiration of 30 to 40. Following this, the temperature averaged about 100 degrees, with pulse about 120, and respiration about 24 for the next eight weeks, after which they were normal except for slight rises. There was a febrile reaction after each administration of plasma. On the ninth hospital day, all the coagulum or necrotic tissue had separated and was lifted off in large sheets, leaving a clean cherry red granulating surface. The wound appeared almost ready for skin grafting at this time, but the general condition of the patient would not permit. On the eighteenth, twenty-eighth and sixtieth days followin the injury, under drop ether anesthesia, small full thickness autografts ("small deep grafts of Davis") were applied to the granulating areas. About 350 were applied on each occasion, or 1050 in all. The size of the grafts varied from ⅛ to ⅜ inch in diameter. The grafts were covered with strips of cellophane wet in zephiran chloride solution 1:1000 on all occasions. Pressure dressings were applied on the first two occasions and reapplied about every four days. A febrile reaction occurred every time they were changed. There was a "take" in only about 60 per cent of the grafts. At the third grafting on the sixtieth day after the injury, the wounds were dressed without pressure. The dressing was removed on the third postoperative day, and heat tent only was used with occasional gauze placed on the wounds wet in saline zepiran chloride solution. There was a "take" in over 98 per cent of the grafts. Also the grafts grew faster without pressure dressings. According to Robert H. Ivy, exposing grafts to the air occasionally, produces better results than with a dressing. The third grafting was delayed due to slough over left iliac crest from lying on that side. Burned area was completely resurfaced on May 24, 1944 (eighty-fourth day). The scars between the grafts were red, elevated and rubbery at first, but improved with age. The burned areas healed with contractures or disturbance of function. Intense itching of the new skin surface was a problem, and this was treated by ointments, gentle massage, heat, protective dressings, and sedatives. Photographs were taken on the fifty-eighth, eightieth, ninety-fourth, and one hundred eightieth days after the burn. (See figures 2 to 5).

CONCLUSIONS

1. Some form of pressure dressing is generally recognized today as the best method for early treatment of burns[1]; but, in this case shock, hemoconcentration and infection were effectively treated with morphine, plasma transfusions and gauze dressings kept wet with normal saline zephiran chloride solution under a heat tent.

2. Reconstructive surgery should be done as early as possible to save time and preserve function[2]. In this case skin grafting was done on the eighteenth day after the injury, and could have been done earlier except for the poor general condition of the patient. However, this is about as early as with the other methods of treatment, such as pressure and eschar treatments.

3. Autografts were used in this case because they are the only ones which can be used with assurance of satisfactory results, according to all recent literature[2].

4. No contractures occurred in this case and it seems that they were prevented by early skin grafting, and by use of the small full-thickness graft of Davis. Although the cosmetic result is somewhat unsightly, the area is covered by clothing.

5. Larger free skin grafts seemed to "take" better and spread faster than the smaller grafts in this case. This is in accordance with V. E. Siler[3], Cincinnati, Ohio, who advocates the "postage stamp thick-split" skin grafts.

6. It is my opinion, from the management of this case, that too much pressure should not be applied to the grafts, because it will destroy many of the grafts and prevent the spread of those which "take"; but gentle mild pressure dressings should be used to hold them in place for at least 48 hours.

7. Cellophane did not stick to the grafts, but it did stick to the new skin which grew from the grafts.

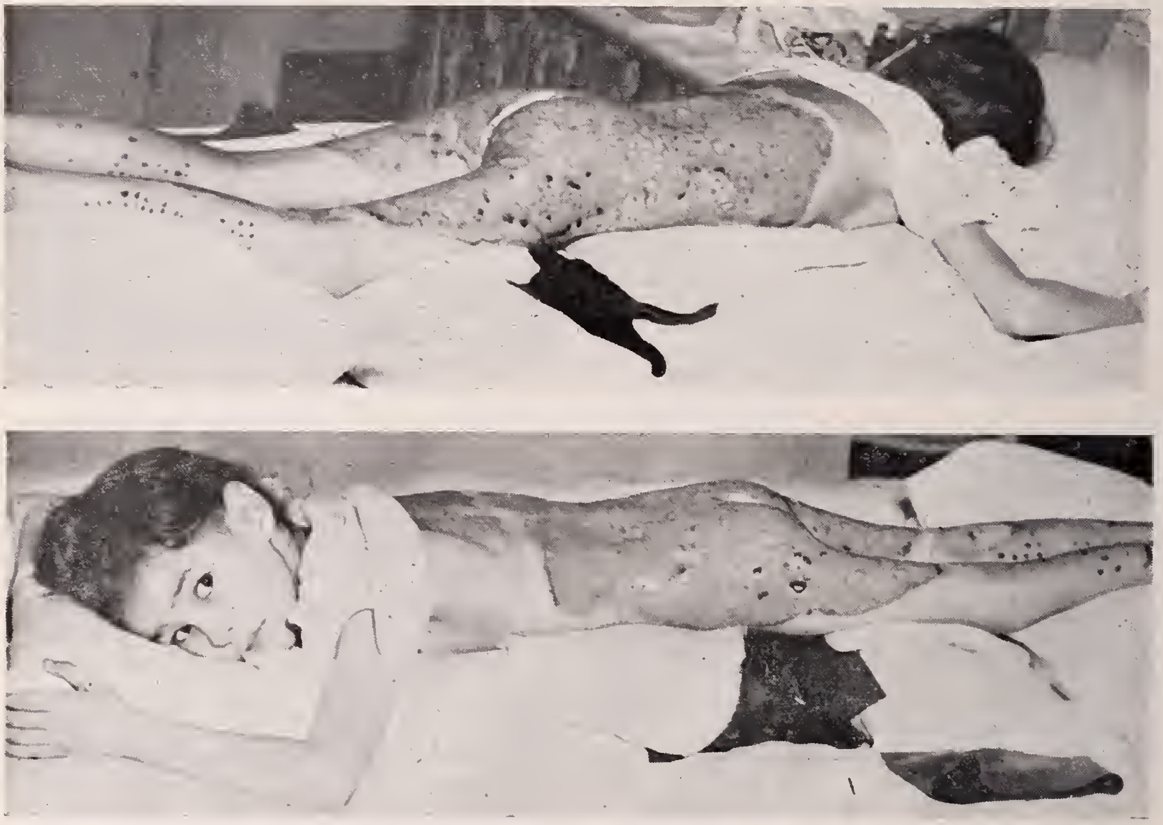

Figure 2. Photographs taken on the fifty-eighth day after the burn and after 700 Davis grafts had been applied.

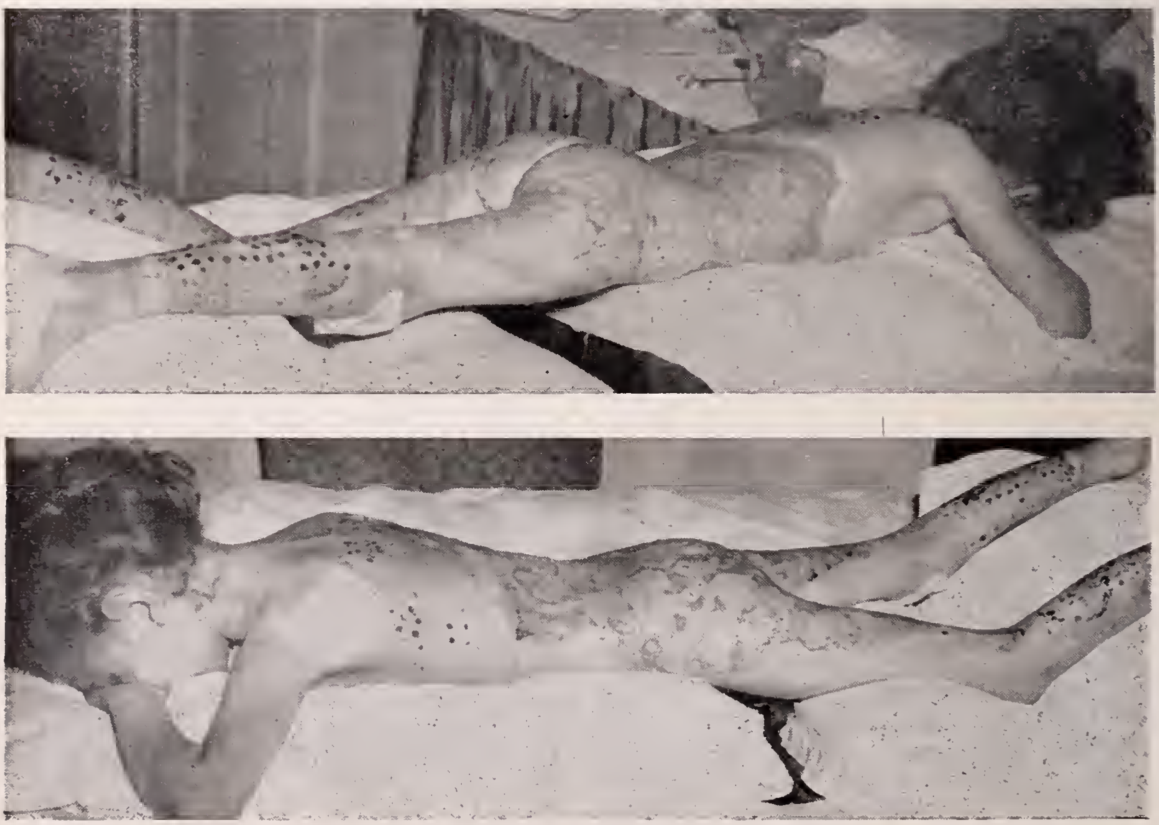

Figure 3. Photographs taken on the eightieth day after the burn or 20 days after the last skin grafting.

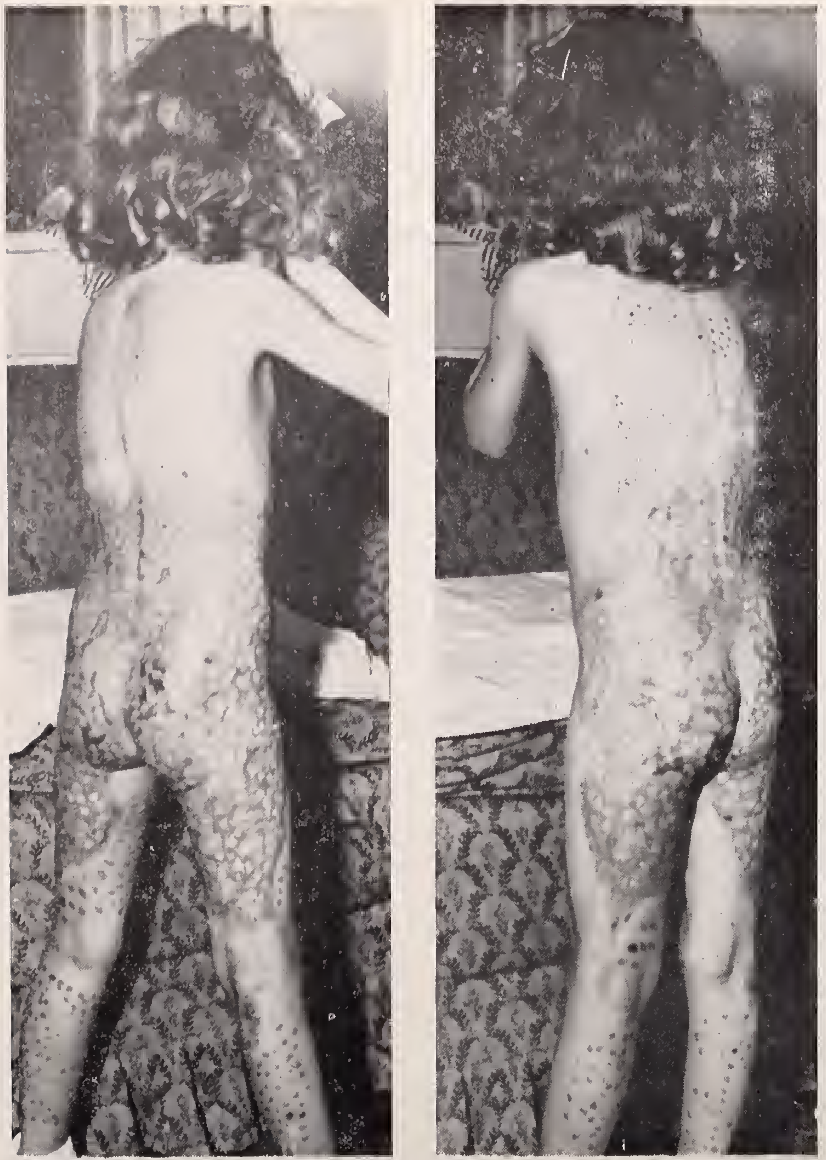

Figure 4. Photographs taken on the ninety-fourth day after the burn show that all the raw surface had healed over. There are several hemorrhagic spots due to scratching.

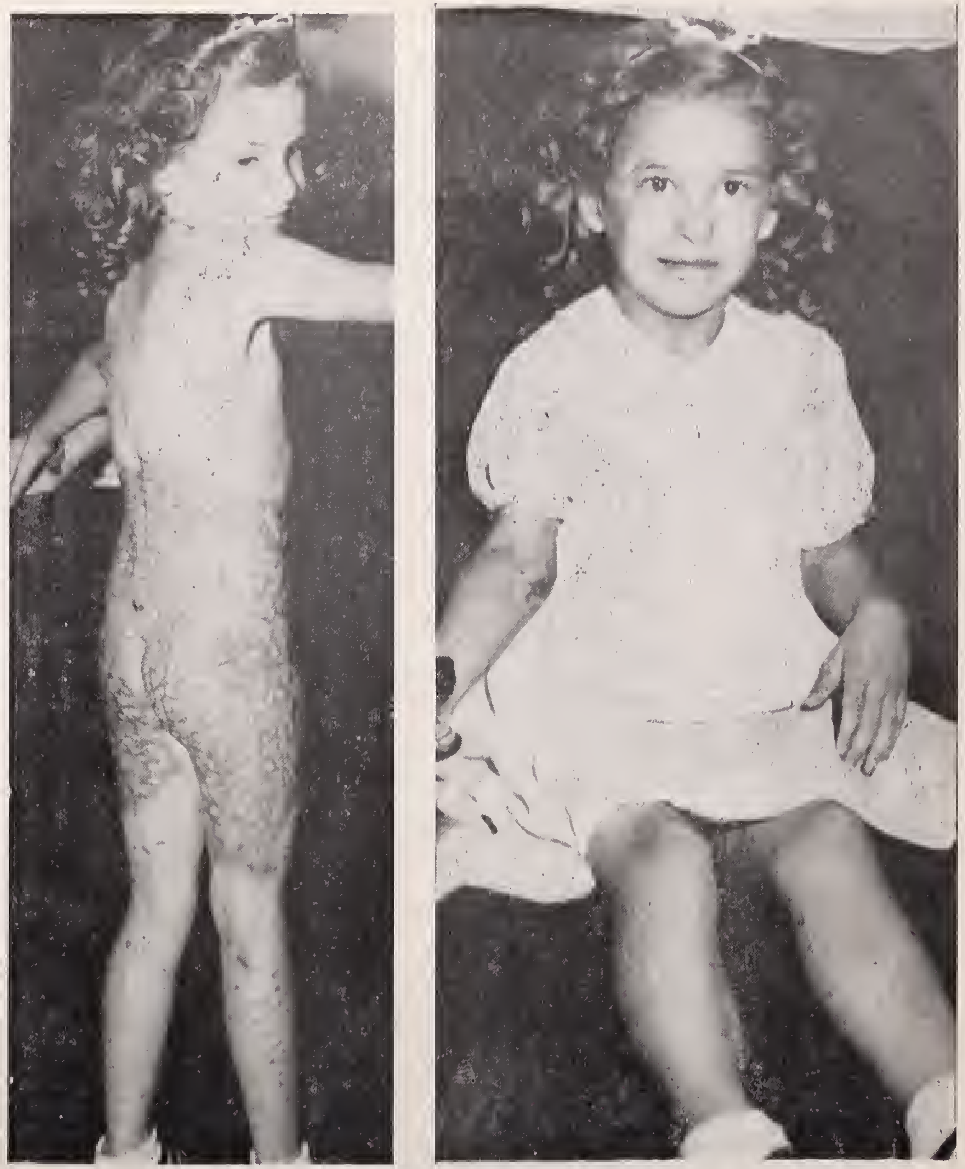

Figure 5. Photographs taken six months after the burn.

8. Skin loss, due to burns, is from the very beginning a major surgical problem, and requires the full knowledge and skill of the physician and much of his time, together with meticulous nursing care.

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Occupational Illnesses in Cotton Industries

III. The Mercury Hazard in Seed Treating

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We have previously reported the acute febrile illness[1] that occurs among new employees exposed to high concentrations of cotton dust, the fact that some employees develop asthma on exposure to cotton dust and the fact that we were unable to find any respiratory conditions peculiar to cotton industries that result in permanent disability[2].

Our present study arose from a chance inspection on a plantation where cotton seed was being prepared for planting. This was in a separate building and even walking through the building gave rise to a metallic taste in the back of the mouth which lasted for several hours. The material dusted onto the seeds was an organic mercury salt and little could be found in the literature to guide us in assessing the problems that might arise from this possible industrial health hazard. Very few workers would be exposed to this hazard in the cotton industry alone, but other seeds are prepared for planting by impregnation with some protectant (frequently organic mercury). We felt, therefore, that at least some reference to seed protectants was inescapable.

Organic mercury compounds were first used in the manufacture of seed fungicides in 1914. Several cyclic and aliphatic compounds of mercury were tried but only those hydrocarbon groups of low molecular weight (such as methyl and ethyl compounds) have been found effective. Unfortunately these compounds are also the most toxic. Their use in prevention of seed-borne diseases such as bunt of wheat, smut of barley, and leaf stripe of oats is a well established principle of plant hygiene.

After cotton has been ginned most of the seed goes to cotton seed oil mills for processing but some is, of course, selected for planting in the following season. This selected seed must be protected against the various molds, fungi and bacteria that might otherwise kill it before it has an opportunity to germinate in the soil.

For a number of years efforts have been made to find some nontoxic protectant for seeds. When a seed has been coated with a metal or other stable products it is permanently contaminated. This introduces a hazard on farms and plantations since any seed that is left over from the planting may, by someone's carelessness, be used as feed for cattle or in other ways be a source of danger to both people and stock on the farms. In recent years several seed processors and chemical companies have experimented with alternates but so far no effective non-poisonous (to man and animals) substitute has been developed which merits official recommendation.

At the present time almost all of the cotton seed is protected by dusting it with a powder whose active ingredient is either 2% Ethyl Mercuric Chloride or 5% Ethyl Mercuric Phosphate. This is a violet colored powder that is dusted on to the seeds mechanically in more or less inclosed operations. Inasmuch as most of the cotton seed for planting purposes in Mississippi are grown by only a few producers, most of the seed protecting is done by them. Due to the problems that arise from attempting this job by hand it is seldom tried in this primitive fashion more than once.

The mercury dust used in disinfecting cotton seed in order to be effective must be extremely violate. Consequently, the hazard in the operation is three-fold; namely, the production of dermatitis, acute mercury poisoning due to inhalation of violate mercury, and the possibility of chronic mercurialism due to such exposures over a long period of time.

I. Dermatitis:

Ethel mercuric phosphate and chloride are primary skin irritants. Exposed surfaces of hands and arms are readily attacked by this dust. The first symptoms may appear anywhere from a few minutes to several weeks after the first contact. An itching rapidly succeeded by a burning sensation with generalized redness of the exposed skin develops. Painful blisters arise if there has been a high concentration of mercury powder on the skin or if it has been allowed to stay in contact with the skin instead of being immediately washed off. These blisters sometimes get quite large and are quite slow to heal. Another unfortunate and not uncommon occurrence is for some of this dust to get down inside of the shoe where it can produce bad blisters and burns of the feet.

The dust may also penetrate the clothing producing a characteristic dermatitis of the abdomen and thighs. This type of distribution of the dermatitis identifies the man who loads the bags with the treated seed. After the bag is full this employee must usually carry it to an adjacent room to be sewed. Waddling this sack of seed inevitably shakes dust onto the worker then grinds it into his clothing and body.

II. Acute Mercurialism

In our experience we have found no cases of acute mercury poisoning. Four cases of poisoning by the inhalation of methyl mercury compounds have been reported[3] as occurring in a factory where seed disinfectants were being manufactured without the rigid control of completely enclosed apparatus. The cases exhibited symptoms not wholly like the effects of metallic mercury poisoning as reported in fur carroting establishments. With the exception of tremor, the symptoms of mercurialism as found among affected hatters such as salivation, stomatitis, and erethism (psychic irritability) were absent and only the nervous system was involved. There were in these cases of methyl mercury poisoning generalized ataxia dysarthria and gross constriction of the visual fields ("I can see all right in front, but it's at the sides I can't see"); memory and intelligence were not affected. These case findings and the reports of laboratory confirmation using rats and monkeys have been described by Hunter, Bomford, and Russell[3].

III. Chronic Mercurialism

The chances of chronic mercurialism developing from this source would be extremely small since the operations involved are seasonal. The seed to be treated is picked in the late fall or early winter and the entire exposure period seldom lasts for more than a few months of the winter. There is another coincidental but important advantage to this, namely, less mercury is volatilized during the cold weather and the skin of the exposed workers is not so warm and moist as it might be at other times of the year—the powder is not so apt to cling to and irritate a dry skin. The rapid labor turnover in this operation is probably another source of protection to the workers. No cases of chronic mercurialism have been reported and inspections of the men working on these jobs failed to show any of the characteristics so commonly found in the days of mercurial carroting in the fur felt hat industry.

ENVIRONMENTAL STUDIES

Although most of the dusting procedures are enclosed there are numerous opportunities for the escape of vapor and dust. The filling of the sacks provides the greatest exposure. Also, leaks in the mechanical mixer and the spilling of the mercury dust while filling the feeding box contribute toward the mercury hazard. The only effective protection against the dissemination of mercury is the engineering control in the form of local ventilation applied to the mechanical mixer. There are several types of commercial seed treaters which are recommended by the manufacturers of the organic mercurial dust. These are so designed and operated as to remove the excess dust and vapor prior to sacking. In addition there are canopy hoods and enclosures provided with exhaust ventilation to remove the mercury-laden dust during the sacking operation. One type of treater used in our state consists of three parts, each of which is properly ventilated. The first part is just the mixing operation, the second is a mechanical automatic weighing out of 100 pounds of treated seed, the third part is the sacking operation. One hundred pounds of treated seeds plummet down into the sack and the fluff of lint and dust laden with mercury is thrown out into a partial enclosure to which continuous suction is applied and thus the worker is protected. This type of mixing and sacking is ideal except that, it must be properly and constantly supervised. It must be checked for leaks and all excess mercury dust must be cleaned off the equipment. This automatic weighing out avoids any handling of the treated seeds. Another protective measure that should be mentioned at this time, is the use of sacks large enough so it would hold the one hundred pounds with enough sack to spare so that manual tramping down of the seed would not be required. In several installations the treaters are so designed that an up-draft exists at the top of the sacking operation to remove the excess lint and also a down-draft suction to remove the powder and lint that sifts out through the bottom of the sack. This means that the two drafts are in competition with each other. In our experience it has been found that it is best for all the suction to be applied at the outlet spout, just above the sacking attachment. A fan should be provided of such a size to remove the excess protectant mixed with the seed without taking the powder off the seed itself. This excess dust picked up by the suction fan is carried outdoors through a duct. The automatic weighing out type of equipment is properly designed and the air movements do not compete with each other. Another disadvantage of a down-draft grill is that it fills up with seed and linters and becomes ineffective soon after the operation is begun.

METHODS OF CONTROL

Protection against the harmful effects of the seed treatment mercurials depends upon good housekeeping measures.

Provision of elbow-length rubber gloves and rubber aprons are requisite for the prevention of mercury dermatitis. Adequate washing facilities including a mild non-gritty soap should be made available for the use of all employees. The rubber gloves should be thoroughly washed and dried and stored in a closed cabinet each day after use. Fume respirators should be kept on hand for use when filling the feeder box with the mercury dust and for emergency use when the exhaust system fails. Each worker exposed to the mercury material should be instructed in the potential hazards of the seed disinfectant and be told that personal cleanliness, frequent washing of hands, and change of clothes after work will help reduce the hazard. He should also understand the need for general cleanliness around the theatment machine, for exhaust ventilation and its maintenance.

Mercury vapor and dust tends to seep out of the machine at leaks in the duct particularly near elbows and clean-out doors. It is necessary to mop up all spilled disinfectant as this will slowly disperse into the atmosphere. Good housekeeping implies that all the seed disinfectant material is kept under control—the metal containers kept tightly closed, the material carefully scooped up to fill the feeder box, and all clean-out doors closed with a tight fit to prevent leakage.

Local exhaust on good mixing machines is so designed to remove all excess dust, vapors, and lint before sacking, and enough suction must be applied at the sacking spout to remove the loose treated material and disinfectant that tends to fly out during the filling of the sacks. Another factor which operates to offset the local exhaust ventilation is the presence of drafty conditions. Very often a natural draft from an open window or door will obviate the advantage of mechanical ventilation. This is best remedied by the installation of a semi-circular enclosure of the sacking operation, open only at the front to permit movement of the sacks. This partial enclosure should have one or two ducts removing air at a velocity of at least 1000 feet per second in the duct.

SUMMARY

Cotton seed for planting is usually protected by organic mercury salts against molds, fungi and bacteria that might interfere with its germination in the soil. The mechanical dusting of this powder onto the seed is associated with the dissemination of enough mercury to produce dermatitis and acute mercury poisoning. The installation of adequate protective equipment and methods of handling are discussed.

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LEGISLATION AND MEDICAL SERVICE

(Guest Editorial)

Augustus Street, M.D.

At this time it seems advisable to review some of the facts and principles upon which we may base our decisions when it comes to supporting or opposing various legislative measures that may come up and are coming up.

Medical service in the United States has always been offered on a voluntary basis. Patients have chosen their own doctors and their own hospitals free from compulsion from any source. Medical education and licensure, and the standards of medical practice have been under the control of competent members of the medical profession. Under this system the quality of medical care has steadily improved and availability has been extended so that the American people today admittedly have the best medical care that is offered to the people of any country in the world. We do not intend to say that this is enough. It is our obligation to continue progress in the quality of medical service, and to support all legitimate efforts to make good medical service available to all the people of our country. Just how this is to be done is no simple problem.

Today the public is being confused by proposals which it is claimed will make medical and hospital care available to all of the people of the country, proposals offered by persons who have had no experience in rendering medical care and who have not sought the advice of competent members of the medical profession, and do not propose to provide a proper voice for the medical profession in the administration of their various schemes. The Murray-Wagner-Dingell bill is such a proposal. There is nothing voluntary about the plan, and the medical profession has had no voice in formulating the bill and would have little or none in the administration of it.

H. R. 1391 by Mr. Miller of Nebraska would establish a department of national health, but so far as we can see the bill does not even specify that the secretary of national health shall be a duly licensed physician, or provided any other recognition of the medical profession.

The Council on Medical Service and Public Relations of the American Medical Association (J. A. M. A. January 13, 1945) has again emphasized that all schemes for health insurance should be voluntary and that the medical profession should be adequately represented in the administration. The Council also calls attention to the fact that since 1875 the American Medical Association has advocated the establishment of an agency of federal government under which shall be coördinated and administered all medical and health functions of the federal government exclusive of those of the Army and Navy. The establishment of this agency with a secretary to be of cabinet rank and a commission including an adequate number of qualified physicians would be the first and most important step in developing a so-called national health program. The medical profession will unite behind legislation to accomplish this purpose, and further constructive steps will be made easier. The report of the Council further states, "After sixty-nine years of requesting, suggesting, recommending and urging this coördination of federal health functions, I believe that the medical profession should take definite steps to further the development of this proposal. I doubt that any serious arguments can be developed against such a progressive step."

The Council then reviews and endorses some of the planks of the platform adopted by the House of Delegates in 1937. They are as follows:

> A. In the extension of medical services to all classes of people, the utmost utilization of qualified medical and hospital facilities already established.
>
> B. The continued development of the private practice of medicine, subject to such changes as may be necessary to maintain the quality of medical services and to increase their availability, including the development and extension of voluntary hospital insurance and voluntary medical insurance.
>
> C. Expansion of public health and medical services consistent with the American system of democracy.
>
> D. The allotment of such funds as the Congress may make available to any state in actual need for the prevention of disease, the promotion of health and the care of sick on proof of such need.
>
> E. The principle that the care of the public health and the provision of medical service to the sick is primarily a local responsibility.
>
> F. The development of a mechanism for meeting the needs of expansion of preventive medical services with local determination of needs and local control of administration.
>
> G. The extension of medical care for the indigent and the medical indigent with local determination of needs and local control of administration.

It seems that with proper coöperation between the allied professions, government, and interested groups this nation should be able to reach the objective of making good medical care available to all by adhering to the fundamental principles of this platform. The Council on Medical Service and Public Relations is composed of men among the most competent in American medicine. They are devoting much time and effort to the study of medical service problems, offer dependable leadership and welcome your suggestions. Active coöperation with this able leadership is surely no less than our duty to the profession and to the American people.

PLAN CENTER

The first quarterly meeting of the Northeast Mississippi Thirteen Counties Medical Society met at Columbus on March 13, Dr. W. J. Aycock presiding as president and Dr. W. H. Cleveland as secretary. The essayists were Drs. Thomas Naugle, C. H. Love and V. B. Philpot, society members, and Dr. Thomas Blake of Jackson, guest essayist. All the papers were especially good. Rarely do we hear a paper so good and practical and usable as Dr. Blake's.

The medical sage of Mississippi, Dr. Bryan of Amory, was unable to attend as he has been quite ill for some time. The society deeply appreciated his telegram expressing regret for being absent. Dr. Felix Underwood who still holds his membership with us expressed his regrets by telegram also.

The Columbus doctors and those of the county were most cordial. A fine banquet with splendid entertainment was provided by them at the Gilmore Hotel.

While in this delightful little Southern city which so impressively preserves the traditions of the antebellum South yet claims many of the latest advancements in progress, we heard plans of a medical center. What a splendid move this would be. Columbus has the foundation for a fine medical center, the medical talent, the funds and the people to lend coöperative assistance.

§

Now that we are not to have our regular State Medical Association meeting, it would seem very fitting, as has been suggested by Dr. Harvey Garrison, Sr., for us to reinforce our district societies and make them better than ever before. Medical information must not be rationed.

Interpreting Medical Literature

THE JOURNAL OF PEDIATRICS, FEBRUARY, 1945

ORIGINAL COMMUNICATIONS

DIAGNOSIS AND MANAGEMENT OF SEVERE INFECTIONS IN INFANTS AND CHILDREN: A REVIEW OF EXPERIENCES SINCE THE INTRODUCTION OF SULFONAMIDE THERAPY.

III. *Meningococcal Infections.*

A. Experiences at the St. Louis Children's Hospital. David Goldring, M. D., and Alexis F. Hartmann, M.D.

B. Experiences at the St. Louis Isolation Hospital. David Goldring, M.D., Richard Maxwell, M.D., and Alexis F. Hartmann, M.D.

This paper presents an analysis of the experiences of the authors in managing meningococcal infections in 77 children at the St. Louis Children's Hospital since the advent of sulfonamide chemotherapy. The years 1937-1942 represent non-epidemic years during which time only a small number of cases with meningococcal infections were admitted. The years 1943-1944 represent the greatest epidemic years in this country's history. The majority of the cases in this series was seen during these last two years.

This is probably one of the most interesting as well as timely papers written upon this subject in many years. It is as full of the fundamentals and scientific treatment and care of infants and children suffering with the diseases indicated as I have had the pleasure of reading. It is certainly worth the while of all the physicians in Mississippi.

Reviewing this paper you will probably get more information from their comment and summary of conclusions which I herewith present as follows:

"In reviewing our experiences during this epidemic, we were impressed with the importance of instituting immediate, intensive parenteral chemotherapy as soon as a definite diagnosis of purulent meningitis was made.

"Earliest possible therapy is important because of the rapid fulminating course taken by some forms of this disease. We have seen a number of patients die within from twelve to twenty-four hours after the onset of symptoms.

"Initial intensive therapy is of importance because at first inspection of a patient with meningococcal infection it is impossible to predict how severe the illness will be. Since the optimum in vivo bacteriostatic sulfonamide drug level effective against the meningococcus has not been established definitely, we believe it is best to obtain levels which are certain to be effective against this organism. We consider this level to be between 20 to 40 mg. per cent.

"A second point in favor of intensive chemotherapy in the treatment of meningococcal meningitis is that frequently the recovery of the meningococcus is delayed for one or more days, and a patient thought to be infected with the meningococcus is later found to have a purulent meningitis due to the pneumococcus or influenzal organisms. The levels of drug we strived to attain; that is, 20 to 40 mg. per cent would, therefore, be considered adequate to cope with any of these infections.

"The parenteral route of administration of the drugs was depended upon since we could place little reliance on drugs given by mouth to be retained, as many of the patients were vomiting during the first one to two days of their illness.

"The intravenous route of sulfonamide administration was abandoned in favor of the subcutaneous method of administration, although the former method is quite good if the patient is not dehydrated. It seemed most satisfactory to us to give the sulfonamide drugs subcutaneously in ½ per cent solution. The sodium salt thus diluted was found to be non-irritating to the tissues, and hydration of the patient was accomplished concurrently, and adequate blood levels usually were attained in from two to three hours.

SUMMARY AND CONCLUSIONS

1. "Two hundred and nine patients with meningococcic infections were admitted to the St. Louis Isolation Hospital between January of 1942 and August of 1943. The majority of cases were seen in the first six months of 1943.

2. "A predilection of the disease for younger individuals and for Negroes was noted. There was a fairly equal distribution between the sexes.

3. "Classical signs of meningitis or meningococcemia were present in the majority of patients. Petechiae were noted in 155 instances.

4. "The diagnosis of meningococcal infec-

tion was based on the recovery of the meningococcus from blood or spinal fluid or on the discovery of typical petechiae in patients with purulent but sterile spinal fluid.

5. "A regimen of rather intensive sulfonamide chemotherapy was used with satisfactory results. It is felt that the optimum blood sulfonamide level is between 20 and 40 mg. per cent until the patient shows definite clinical improvement. No unusual evidence of harm to patients from these blood levels was noted. A large volume of dilute alkaline urine is thought to be important in preventing hematuria. Sulfanilamide may be used to replace other sulfonamides in the treatment of meningoccocic infections if gross hematuria or suppression of urine occurs.

6. "The newer sulfonamides, sulfamerazine and sulfapyrazine, appear to be as effective as sulfadiazine in controlling meningococcic infections. For careful clinical studies of these drugs, the reader is referred to earlier reports in the medical literature.

7. "The case fatality rate in this group of patients was 9.1 per cent. One-half of the deaths occurred in patients who were moribund on admission. If these deaths are excluded, the case fatality is 4.5 per cent. The majority of deaths in patients who survived over twenty-four hours after admission to the hospital occurred in elderly individuals."

COMMENT

It has been my duty and oftentimes painful duty to treat a number of cases similar to the ones reviewed here. The experiences of the authors and the type of treatment given by them has been practiced by us for several years.

State Board of Health

Felix J. Underwood, M.D.

THE UTILIZATION OF DDT BY COUNTY HEALTH DEPARTMENTS*

by

H. A. Johnson, Senior Sanitary Engineer
U. S. Public Health Service

Historical—The chemical we now know as DDT was apparently first synthesized in Europe in 1874. As the chemical was found to be inactive and hence of little use to the chemist its discovery was promptly all but forgotten and nothing was done with it for the next 60 years.

About four years ago while searching for new insecticides a worker named Muller in Europe tried the long forgotten chemical on flies, moths, etc. It was found to be very effective and Muller promptly covered the properties of the chemical with patents which were assigned to J. R. Geigy, a large chemical manufacturer of Basel, Switzerland. Two British patents were issued on the chemical under date of September 15, 1942. Paul Muller also obtained a patent in this country on September 7, 1943. (No. 2,329,074).

In September 1941 the Geigy Company, Switzerland, notified its representative in this country of this new product telling of its great usefulness against a certain potato beetle.

In August 1942 the parent Geigy Company sent to its New York representative 100 pounds of a powdery substance which it called Gesarol which is said to be an insecticide containing five per cent DDT in an inert carrier. In October 1942 the reports regarding the effectiveness of the product were made available to the Department of Agriculture. These reports seemed to indicate unusual merits of DDT and 220 pounds of DDT were sent to the United States in order that tests might be made.

Chemical and Physical Properties—

Chemically pure DDT is a crystalline solid practically colorless when in solid form. For commercial use it has been, and probably will continue to be supplied as a white powder with a weak fruit-odor. The material is stable chemically. It is practically insoluble in water. It is soluble (about 30 to 50 per cent) in xylol, acetone, cychohexinone, and certain oils. It is moderately soluble (up to about 7 per cent) in kerosene, lubricating oils, gasoline, crankcase oil, products which we normally use as larvicides.

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*Read before the Mississippi Public Health Association, Jackson, Mississippi, December 7, 1944.

Although DDT has a low melting point (close to that of boiling water) its low volatility and solubility may account for its unusual lasting properties mentioned below.

NOMENCLATURE—DDT is made from chloral hydrate, monochlorbenzine, and sulphuric acid and the chemical name is "dichloro-diphenyl-trichloroethane" from which the name DDT is derived. When diluted in inert dusts such trade names as Gesarol or Neocide have been applied to the mixture.

DEVELOPMENT IN THE UNITED STATES—As the value of DDT became apparent the Office of Scientific Research and Development asked the Department of Agriculture to investigate on a large scale the possibilities of the new insecticide against agricultural and other pests. Much work has been done along these lines by that agency, and within the past 18 months the U. S. Public Health Service has also done some rather extensive investigations relative to its possibilities as a mosquito larvicide and insecticide.

DDT may be used as a dust, in a plain solvent, or in an emulsion which will mix with water. As a dust it is usually used in low concentration in some inert powder. In this form the powder has found a wide use as a very efficient and lasting lousicide by the armed forces. DDT in dust form has been shown to be effective in the control of fleas on dogs, ants, ticks, termites, and various agricultural pests.

In a volatile solvent DDT has been widely used as a protection to clothing against body lice and the protection afforded has persisted up to nine weeks through nine washings.

In solutions in kerosene and in other solvents DDT has been used very effectively against flies by treating walls in houses and stables—the lethal effect against flies alighting on treated surfaces remaining over several weeks depending on the rate of application.

In an emulsified form DDT (dissolved in a solvent and an emulsifier added) can be diluted in water and used as a cattle spray, or for agricultural sprays.

IMPORTANCE TO HEALTH AUTHORITIES—Our health departments are interested in larvicides and insecticides as an aid in controlling insects and other pests of importance to the public health. This includes mainly flies, ticks, fleas, roaches, mosquitoes, and rodents.

Some very interesting results with DDT when used against these insects are reported in the February 1944 issue of the Journal of Applied Entomology by the Department of Agriculture.

SPECIFIC PROBLEMS OF HEALTH AUTHORITIES—For the control of roaches and ants, dusts containing small amounts of DDT have proved efficient. Such a dust placed around the edges and corners of a room has proved more effective than undiluted sodium fluoride and the effect has been lasting. It is reported that a mixture containing a small amount of DDT and a spreader diluted with water and applied to a wall surface was effective against flies and roaches in a dairy barn.

Many tests have shown that a solution of DDT in kerosene or a water emulsion of DDT when used on the walls of a building at a rate just below the "running" point will kill all flies and mosquitoes alighting on the surface for several weeks.

In mosquito control work DDT is of use as an insecticide and as a larvicide.

As an insecticide it is used as outlined above. When mixed with kerosene, however, it will stain wall paper or painted walls. It has been found that when an emulsified form is used mixed with water there is no permanent staining of the finest wall papers. When used as a residual in a room the mixture should be applied at a rate that will not permit it to run in a vertical surface. As there is little aerosol affect, as when using a pyrethrum spray, space spraying is not considered to be advantageous.

Walls treated as indicated will be lethal to flies and mosquitoes for several weeks and some residual effect against roaches and ants will doubtless be noted.

As a larvicide DDT can be used for the control of mosquito larvae.

1. The material is soluble up to 7 per cent in ordinary larvicidal oils and it has been determined that only a small amount of DDT per acre of water surface is necessary to kill mosquito larvae. This means that only a small amount of the larvicidal oil per acre is necessary as a carrier. As the usual rate for a larvicide is 20-30 gallons per acre it is at once apparent that a great saving in labor, cost, and difficulty of larviciding work may lie just ahead of us.

It is of course impossible even to distribute the minimum amount of oils that seem necessary per acre but doubtless a compromise with a much smaller oil application per acre can be used if DDT is incorporated in some quantity depending on amount of oil used. Undiluted crankcase oil, if free of lumps, has been found to be an excellent vehicle for applying DDT.

2. While the above method of using DDT in oil is as a surface larvicide, an emulsion or dilution larvicide may prove effective in certain areas. A stock solution can be made up and diluted for use at the site applying the material in the usual way. There is little agreement as to the amount of DDT required in a larva producing water but if rate of 1 part DDT to 1,000,000 parts water is used complete larvae kill will usually result. A larger percentage than this may adversely affect fish life. The correct amount is usually determined for each situation.

The question of whether DDT should be used as a surface or dilution larvicide is still open, but experimenters agree that with minimum doses for initial kill, first stage larvae can be found at the end of six days, whether DDT is applied as a surface larvicide or as a dilution larvicide.

The action of DDT against larvae is at times very erratic and while considerable progress has been made with DDT as a larvicide many complex problems still must be solved before a regular and effective larvicide program using DDT can be recommended to health authorities.

3. DDT dust has been used successfully for larval control in connection with military problems of malaria.

The action of DDT has been found to be slow when contrasted with pyrethrum, larvicidal oils, etc., and one should not attempt to determine the larval mortality until 24 hours after its application. Apparently the chemical acts as a stomach poison and also affects the nervous system. Mere contact with the chemical by an insect usually results in death.

The action of DDT against rats and mice is an important one to the health worker. As far as has been determined DDT is not effective against rats. Reports are prevalent however that DDT incorporated in a dust and inhaled does affect mice. Other animals such as guinea pigs, cats, and rabbits have not exhibited toxic symptoms under these conditions.

Dangers of DDT—In using a chemical with powerful insecticidal properties the question at once arises, "What are the dangers connected with its use?"

The toxicity to humans has not yet been definitely determined but it is known that the material can be absorbed through the skin when in oily solutions. It seems rather clear to workers with DDT that the danger is small when compared to handling sodium fluoride or paris green but as DDT is a new product caution should be observed in handling the chemical.

Powdered sodium fluoride is in common use in restaurants and dairies and paris green is used for larvicidal work. It would appear that DDT in powder form does not present as great a hazard as do these materials, particularly as it is used at low strengths in inert dusts. When used as a spray or wash the penetrating power is of course considerable and a hazard can well exist under such conditions in restaurants and dairies. No serious effects have yet been observed when used as a cattle spray in dairy barns. In view of its extraordinary efficacy its cautious use seems amply justifiable.

Availability—DDT is being manufactured in large quantities in the United States but at present all available is being used by the armed forces. There is some prospect however that by another year production will increase to the point where some will be available for civilian use. Within the past six months there have been two reductions in price announced, the present quotation being seventy-five cents a pound.

SUMMARY

DDT is a product which bids fair to become of outstanding service to the health worker in connection with his sanitation problems. The material possesses merit far above those at present available for insecticidal use. While this is so, DDT is not a panacea for all the shortcomings of present chemicals and it possesses distinct limitations, some of which are known, others as yet unknown.

The limitations and indefinite action of DDT already noted are being made the subject of further intensive research and it is felt that until many of these difficulties can be worked out a routine use of DDT by health workers cannot be recommended to the exclusion of other well known products.

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SOME RECENT ACCOMPLISHMENTS IN PUBLIC HEALTH

A preventive health program for all Mississippians through local full-time health departments has been a major objective of the State Board of Health for many years. Up until the outbreak of the war steady progress was being made, a total of 63 of the state's 82 counties having organized such services. Two additional counties were able to organize full-time departments in 1943 because military camps were located within their boundaries and it was imperative that routine health services be made available. The War Department's recognition of the importance of local health activities should make it obvious to any civilian that he is the beneficiary of much protective service if he has the good fortune to live in a county where there is a full-time health department. Most counties now recognize this and are planning provision for such facilities as soon as they can be made available.

In spite of war-time difficulties and the securing of trained professional personnel, the State Board of Health has been able to carry on most essential activities and to institute a number of new programs which had been in planning for some time. These new programs are in the field of public health statistics, school health, nutrition, and mental hygiene. While almost every department has had to expand its program to meet new needs at this critical period, the expansion has been particularly noteworthy in industrial hygiene, maternal and child health, vital statistics, and in the control and treatment of venereal diseases, and other preventable diseases.

Venereal Disease Control

At the beginning of 1943 the State Board of Health and county health departments were operating 300 diagnostic and treatment clinics for venereal diseases. In 1943 the case load in these clinics reached 38,000. In these clinics in the two years 1943 and 1944, approximately two million treatments were given. The case load consisted primarily of registrants, contacts to military personnel, other infectious cases, and expectant mothers. Over 25,000 registrants with syphilis were placed under treatment and approximately 15,000 of these completed reasonably adequate treatment.

In order to take advantage of the new rapid methods of treatment of syphilis and gonorrhea, to make complete treatment possible in a high percentage of cases, and to provide isolation facilities for those dangerous to the war effort and community, the State Board of Health started development of rapid treatment hospitals early in 1943. This was made possible by the financial and technical coöperation of the Federal Works Agency and the United States Public Health Service. By the close of 1944 this rapid treatment program had become stabilized so that three hospitals were in operation with a total bed capacity of 410 and an average of 800 patients monthly were being admitted for treatment. Approximately half of those admitted were early syphilis, and the other half consisted of gonorrhea and other venereal diseases. These very desirable facilities, together with recently developed rapid treatment methods, lead to radical changes in the clinic program. By the end of 1944 the local clinics were serving primarily as diagnostic, case-finding and educational centers, in addition to treating such cases as were not admissible to the rapid treatment centers. This means that practically all infectious cases of syphilis and gonorrhea being found now are getting complete treatment within a few days in the hospital rather than very inadequate treatment over a long period of time through the local clinics. Maintenance of the rapid treatment centers in the future is a necessary part of the control program. From the inception of the rapid treatment center program in 1943 through December, 1944, a total of 4,831 patients were admitted to these hospitals.

Throughout the development of the venereal disease program one urgent need has been facilities for intensive treatment of neurosyphilis cases which had received maximum benefit from clinic treatment but had not shown satisfactory response to treatment. The 1943 legislative session appropriated funds and passed necessary legislation providing for setting up a special neurosyphilis unit in available space in one of our state institutions. This legislation provides for a 25-bed unit in which will be treated asymptomatic neurosyphilis cases which fail to respond to available clinic treatment. The intensive fever and chemotherapy to be given in this unit will prevent most such cases from progressing to the stage in which they will become permanent public charges in the incurable stage.

During 1943, fifty-two lay investigators were added to county health department staffs for the purpose of case-finding, case-holding, and education. It is their job to follow all leads to suspected cases and see that such suspects are examined and to follow up lapsed cases to secure continuous treatment. By the latter part of 1944 they were following an average of 3,000 suspects per month, about half of which were found to be infected, and most of those infected were being referred to rapid treatment centers for adequate rapid treatment. Although this group of workers were employed as a war emergency solution to the problem of scarcity of nurses, they have proved their worth.

Tuberculosis Control

Tuberculosis is one of the major public health problems in Mississippi. In recent years the death rate has declined about 50 per cent, but in spite of this the rate is high, especially in the Negro race. During 1943 and 1944 special emphasis was placed on case-finding. Diagnostic facilities were improved by making x-ray machines available to all county health departments. This makes possible x-ray of all contacts as rapidly as they are found and has led to a higher and increasing percentage of cases being diagnosed in the earlier stages.

Through the increased availability of local x-ray diagnostic facilities, the coördinated efforts of Selective Service and the State Board of Health in case-finding and reporting among registrants, the reporting of Army and Navy medical departments, and the case-finding and reporting of veteran's facilities, there was a sharp increase of cases found and reported in 1943 and 1944. In 1942 there were 1,428 cases reported, while in 1944 a total of 1,860 cases were found, an increase of over 30 per cent.

In many areas of the state, x-ray examination of food handlers, teachers, and other important groups has become routine and leads to the finding of many active cases.

Whooping Cough

In 1943 it became evident that whooping cough protection by inoculation was promising enough to justify mass application of this protective measure. Consequently, in 1943 and 1944 a whooping cough protective program was initiated, the vaccine being made available to children from four months through three years of age. This service is available without charge to any child in this age group. During 1943 and 1944 some degree of protection was given to approximately 40,000 children three years of age and under. This service has proved to be a most popular service because of the broad experience of the public with whooping cough.

Typhus Fever Control

The incidence of typhus fever in the state has shown a rather alarming increase during the past few years. In an effort to arouse the citizens to this hazard, the State Board of Health, through its local departments, has endeavored to institute all known measures for its control. Considerable epidemiological work has been done as new cases develop and new areas become infected. Vent stoppage programs have been inaugurated in two of the larger cities. Rat eradication work was conducted in eighteen cities and towns during 1943 and again in 1944. Extensive educational work has also been accomplished aiming at improvement in methods of garbage disposal and the elimination of rat harborages.

Malaria Control

Malaria control work has been confined almost entirely to war areas. Drainage and anti-larval activities were carried on in extra-cantonment areas around 45 Army, Navy and war industry establishments. Adult anopheline densities have been reduced to a satisfactory level around these establishments, and the amount of malaria reported in these areas has been negligible. Considerable educational work has been accomplished in a number of counties in which military personnel are located. This has been carried out during the summer months through the use of specially trained lay workers. Annual blood surveys have been made of large samplings of the population surrounding flood control reservoirs in north Mississippi, in coöperation with the U. S. Corps of Engineers. Malaria control on the reservoirs is a function of the U. S. Engineers. The blood surveys are used as an index of the effect these recently established flood control projects will have on the malaria rate of the surrounding population.

Industrial Hygiene

The services of the Division of Industrial Hygiene have been expanded to include a fully equipped chemical laboratory and the necessary instruments for the collection of field samples. Consequently, the Division is better qualified to measure atmospheric contaminations in industry and to evaluate and propose methods for control. The number of industrial nurses has increased from eleven to seventy-eight and the quality and scope of their activities have been improved by frequent service visits of the Industrial Nursing Consultant of the Division. The food-handling processes are regularly checked for sanitation and the menus for balanced meals. The number of routine factory inspections for safety, sanitation, and freedom from occupational poisons have been doubled. To perpetuate these new services, regulations covering first aid, safety, sanitation, maximum allowable concentrations of harmful materials, and occupational disease reporting, have been established.

Nutrition

The services of the nutrition consultant are available to local health departments and to institutions and other agencies upon request. Assistance has been given local health departments in the development of more effective and more uniform nutrition teaching in the total health program primarily through group and individual conferences. The nutrition consultant has worked with other agencies in formulating a broad general community nutrition program.

Assistance has also been given in the development of the nutrition phase of the school health program. In addition to workshop activities, many smaller group discussions on nutrition were held with teachers. The use of food records to stimulate interest was found to be especially effective. In July, 1944, the demand for nutrition service was such that a second nutritionist was added to the staff, her duties being principally assigned to school service.

In all parts of the nutrition program, emphasis has been placed on the need for better food habits and the need for wiser use of available resources, including foods which can be produced in Mississippi, in order to improve the nutritional status and thus promote better health.

Milk Control

The impact of the war effort in Mississippi had an immediate effect in increasing the demand for good quality milk for both the civilian and military populations. The State Board of Health, by the assignment of additional personnel and utilizing the assistance of all agencies interested in milk production, used every means possible to increase milk production and to surround it with adequate public health safeguards. As a result fairly adequate milk supplies have been available generally throughout the state, except in the Pascagoula area. Here milk has been brought into the state from Minnesota for the past several years. While all milk sold throughout the state has been fresh fluid milk, until recently, it has been necessary to permit the sale of lower grades of pasteurized milk in some areas. Due to loss of labor, drought, and other factors affecting milk production, late in the summer of 1944 it became necessary for one military establishment and one city to resort to the use of reconstituted milk. Later two other camps began securing milk from out-of-state sources due to the winter decrease in production following an extremely late summer drought. New dairies are being developed and production increases are expected during the spring months which will relieve the present shortages.

During the past two years eleven new pasteurization plants have been placed in operation in the state.

Laboratory Services

During the two-year period, 1943-1944, the personnel of the Laboratory examined 835,006 specimens. These specimens were of all types routinely examined in a public health laboratory.

Animal brain examination for diagnosis of rabies has demonstrated increasing prevalence in dogs throughout the state and in foxes in much of the state. Rabies vaccine was prepared and 4,648 complete prophylactic treatments for prevention of rabies in human beings were distributed.

Typhoid vaccine was prepared and 788,160 cc. were distributed to the private physicians, hospitals, and health departments for use in inoculating individuals for the prevention of typhoid fever.

During 1943 the Laboratory made all serological tests for syphilis on blood specimens from Selective Service registrants required in physical examination for induction into the armed forces.

The Laboratory has coöperated with the Navy Recruiting Service by making serological tests for syphilis on all applicants for enlistment from this state and with the medical services of the various military establishments in the state by performing certain scientific procedures for which such military establishments were not equipped.

The Laboratory has coöperated with the hospitals and clinics of the state by furnishing them with advisory laboratory service for in-service training of their technicians. Refresher courses in laboratory procedures have been given to 20 hospital and clinic laboratory technicians. The courses have been for four weeks each in a laboratory approved by the American Society of Clinical Pathologists for training laboratory technicians. During the period of absence of the local technicians a well-trained and competent technician was furnished the hospital or clinic without cost to them.

A complete fixation procedure has been established to give a quantitative titre of blood specimens submitted from treated cases of syphilis. This service is available to physicians, health departments, and rapid treatment centers.

PREVALENCE OF COMMUNICABLE DISEASES IN MISSISSIPPI

	Jan. 1945	Jan. 1944	Jan.-5 yr. avg.
Acute poliomyelitis	2	1	1.4
Bacillary dysentery	634	505	396.8
Dengue	0	0	0.0
Diphtheria	43	14	29.4
Influenza	8659	24525	19197.4
Measles	485	316	1184.6
Meningococcus meningitis	21	46	24.2
Other forms meningitis	3	11	5.8
Pellagra	156	178	185.2
Pneumonia	2225	3151	2654.4
Pulmonary tuberculosis	132	116	107.8
Scarlet fever	174	45	77.0
Smallpox	0	3	1.8
Tularemia	1	2	3.0
Typhoid fever	5	2	3.2
Typhus fever	12	5	5.0
Undulant fever	8	0	3.0
Whooping cough	546	1021	696.8

News and Comment

PHYSICAL RESTORATION FOR PHYSICALLY IMPAIRED ADULTS

E. B. Whitten
Supervisor, Technical Aids
Vocational Rehabilitation

Following World War I, Congress made provisions for the rehabilitation of physically impaired veterans. Out of this experience in the readjustment of disabled veterans grew the demand for a service of vocational rehabilitation for civilians. Such a law was enacted by Congress in 1920. In 1922 the legislature of the state of Mississippi accepted the federal law, and the State Board for Vocational Education was made responsible to the Mississippi legislature for its administration.

From the inception of the program until 1943, the work of rehabilitation was retarded by the fact that no funds were available for the purpose of removing disabilities. Many times clients were trained around disabilities that could have been substantially reduced, and others had to be rejected because their disabilities were entirely remediable. Many of these people, being unable to pay for medical care necessary to correct their impairments, remained unemployable and a burden to their relatives and often to the state.

Under the Vocational Rehabilitation Act Amendments of 1943, approved July 6, 1943, each state which has an approved plan for vocational rehabilitation is eligible to receive a federal grant of funds to cover the following items in the administration of the program of rehabilitation:

I. One hundred per cent of the expenditures necessary for the proper administration of the plan of services to disabled individuals.

II. One hundred per cent of the costs of guidance and supervision of these disabled individuals.

III. Fifty per cent of necessary expenditures under the state plan for "case service" to disabled individuals (not including war disabled civilians).

IV. One hundred per cent of the necessary cost of providing vocational rehabilitation to disabled individuals certified to the state by the administrator as war disabled civilians.

CASE SERVICE includes the cost of supplying the client with:

Rehabilitation training (including tuition)
Medical examinations
Corrective surgery
Therapeutic treatment
Hospitalization
Transportation, occupational licenses, and customary occupational tools and equipment.
Prosthetic devices
Maintenance during training

Books and other training materials.

The Rehabilitation Division is now able to furnish physical restoration services to clients who meet the following conditions:

1. The individual's disability must be an employment handicap.
2. The disability must be relatively stable or slowly progressive.
3. The disability must be considered remediable; that is, it is expected that it can be substantially reduced or eliminated in a reasonable length of time.
4. The individual must be unable to pay for the needed service from his own resources.
5. Veterans of World War II with over ninety days of service are referred to the Veteran's Bureau for rehabilitation services.

Realizing that the administration of a program of physical restoration would present many problems of technical nature, the director, after consultation with medical and hospital authorities, appointed a professional advisory committee to advise the Division on policies involving provision of medical care to rehabilitation clients. An effort was made to have on the committee representatives of nursing, hospitals, and the medical specialties most used by the Division.

This committee is composed of the following members: Dr. J. P. Culpepper; Miss Katie Lou Lord; Dr. R. H. Biggs; Dr. L. J. Clark; Dr. Paul B. Gamble; Mrs. B. S. Guyton; Dr. W. C. Thompson; Dr. V. D. Hagaman; Mrs. Karenza Gilfoy; Dr. F. J. Underwood; Dr. T. H. Blake; Dr. Harvey Garrison, Sr.; and Dr. Estelle Magiera. Other members may be added if need is indicated.

Dr. Guy Post is medical consultant to the rehabilitation personnel. A medical social worker will be added to the staff as soon as practicable.

The functions of the professional advisory committee are as follows:

1. To advise the rehabilitation staff with respect to general policies and the establishment of standards for physicians, surgeons, nurses, and hospitals to be used in the physical restoration program.
2. To advise the Division concerning rates and methods of payments for services, supplies, and prosthetic appliances.
3. To assist in interpreting to the professional personnel and institutions participating in the program the policies and procedures adopted by the Rehabilitation Division.

At a recent meeting of the committee, the general procedures to be followed in providing physical restoration services were discussed and a maximum fee schedule for professional services was approved.

Some of the procedures of the rehabilitation division that will be of general interest to physicians and surgeons are as follows:

1. Medical examinations are required of all clients before they are accepted for service. The general medical report is used to help determine whether the individual's disability is sufficient to make him eligible for services. The recommendations of the physician are studied to determine the need for further examination, treatment, etc.
2. A client may be sent to a specialist in the field of his disability when the need is indicated. Special diagnostic techniques including x-ray, electrocardiogram, etc., will be authorized when recommended by a specialist.
3. If physician's report indicates that client's disability can be removed or subsubstantially reduced in a reasonable length of time, and if he is otherwise eligible for service, he is given physical restoration services including treatment, surgery, hospitalization and prosthetic appliance as indicated.
4. The client is allowed to select his physician and hospital from lists of those that have been approved by the professional advisory committee for providing the needed service. He will be encouraged to use the approved facilities nearest his home.
5. Physicians and hospitals will be authorized in writing to render indicated services to rehabilitation clients. Payments will be made by check upon Division funds following receipt of itemized bill for services rendered.
6. Every possible effort will be made to keep from interfering with the normal physician-patient relationship.

With the coöperation of the medical professions and related institutions the staff of the Vocational Rehabilitation Division hopes to be able to make employable many people who would otherwise continue to be burdens upon society.

Woman's Auxiliary

President	Mrs. L. J. Clark	Vicksburg
President-Elect	Mrs. Stanley Hill	Corinth
First Vice-President	Mrs. H. C. Ricks	Jackson
Second Vice-President	Mrs. Henry Boswell	Sanatorium
Third Vice-President	Mrs. W. H. Anderson	Booneville
Recording Secretary	Mrs. Geo. W. Owens	Jackson
Fourth Vice-President	Mrs. Ben Walker	Jackson
Treasurer	Mrs. J. D. Simmons	Cleveland
Historian	Mrs. Harvey Garrison	Jackson

Councilors: First District, Mrs. H. L. Cockerham, Gunnison; Second District, Mrs. B. S. Guyton, Oxford; Third District, Mrs. Thomas M. Gore, Houston; Fourth district, Mrs. J. K. Avent, Grenada; Fifth District, Mrs. A. L. Gray, Jackson; Sixth District, Mrs. R. L. Simmons, Meridian; Seventh District, Mrs. J. P. Culpepper, Hattiesburg; Eighth District, Mrs. A. B. Harvey, Tylertown; Ninth District, Mrs. S. B. McIlwain, Pascagoula.

COAST AUXILIARY

Mrs. E. C. Parker entertained the Medical Auxiliary in her home on East Beach February 21. Spring flowers dominated as the decorative motif and were carried to the tea table which had in addition the hatchet and cherries in honor of Washington's birthday.

This meeting was one of the outstanding in the year's program as the president of the State Medical Auxiliary, Mrs. Lawrence J. Clark of Vicksburg, was in attendance, as was the president-elect, Mrs. Stanley Hill of Corinth. Both officers brought messages of greeting, expressed appreciation of the Coast's camellias and gave the Auxiliary's objectives for the year.

Following the talks of the president and president-elect, time was given for extemporaneous talks from others present at which time Dr. Virginia Howard and Miss Mildred Herser of the Public Health Service spoke of their work with child and maternal welfare and asked the coöperation of the women of the county in supporting organizations that are interested in social service From the Federal Nursing School at Hardy Court, Mrs. F. E. Keeling gave an interesting account of the work done at the school. Representatives of the Biloxi and Pascagoula auxiliaries were also in attendance as follows: Mesdames J. N. Lockard and F. B. McIllwain, Pascagoula; Mesdames George Wallace, D. L. Hollis, B. Z. Welch, Biloxi. Others present were Mrs. Carl Kohlberg and daughter, Kathleen, Duluth, Minn., Mrs. W. E. Wilson and Mrs. W. D. Wells, Gulfport; Mrs. Finley B. Hewes and N. E. Rousseau.

Members present were Mesdames W. P. Sheely, M. M. Snelling, W. A. Stevens, C. A. McWilliams, H. K. Rouse, James Van Pelt, Richard Gates, Joe P. Evans, M. Dunn, F. L. Wright, H. Davidian, C. Rotenberg, A. C. Hewes, E. C. Parker and Dr. Emma Gray.

SOUTH MISSISSIPPI AUXILIARY

The Auxiliary to the South Mississippi Medical Society was held in the home of the president, Mrs. W. W. Crawford. Her home was beautifully decorated with spring flowers from her own garden.

Reports from the various committees were had. Special attention was called to the placing of *Hygeia* before the public and the individual subscriptions to the *Bulletin.*

Doctor's Day was observed on Valentine's Day, by placing a pot plant in each doctor's office by the Auxiliary.

New officers elected for the following year are: Mrs. Earl Green, president; Mrs. S. E. Bethea, president-elect; Mrs. E. S. Busby, first vice-president; Mrs. C. C. Hightower, secretary, Mrs. B. D. Blackwelder, treasurer, Mrs. R. H. Clark historian, Mrs. Nollie Felts, reporter.

A delicious party plate was served to the following members: Mrs. H. C. McLeod, Mrs. R. H. Clark, Mrs. E. W. Green, Mrs. S. E. Bethea, Mrs. J. P. Culpepper II, Mrs. R. E. Schwartz, Mrs. Nollie Felts, Mrs. V. C. Temple, Mrs. Harry Fridge, Hattiesburg; Mrs. Mable Mason, Lumberton; Mrs. R. F. Ratcliff, Mrs. A. K. McMillen, Lucedale; Mrs. E. N. Blount, Bassfield; Mrs. P. C. Risher, Mrs. T. P. Haney, Laurel.

After the meeting the members enjoyed a walk through Mrs. Crawford's beautiful flower garden.

CENTRAL AUXILIARY

The Central Medical Auxiliary met March 6, in the home of Mrs. Charles B. Mitchell, 2020 North State Street. The spacious living and dining rooms were beautifully decorated with white and purple iris, snapdragons, red lilies, ferns, and other mixed flowers.

The president, Mrs. W. R. Bethea, presided over the business meeting, and the officers made their reports. "Doctor's Night" was postponed until May, since the State Medical meeting will not convene this year.

Dr. Kemmerer, one of the club members, gave an informative talk on the Murray-Wagner-Dingell bill. Mrs. Daniel C. Campbell, wife of the new commanding officer at Foster General Hospital, was a guest of the Auxiliary.

Mrs. Thomas Bailey, first lady of Mississippi, and guest of the Auxiliary, poured tea. Dainty Lady Baltimore cake, kisses, and salted nuts were served.

The following members and guests were present: Mrs. W. R. Bethea, president; Mrs. J. P. Wall, Mrs. H. F. Magee, Mrs. J. T. Weeks, Mrs. Thomas Bailey, guest; Mrs. Lauch Hughes, Mrs. N. C. House, Mrs. Temple Ainsworth, Mrs. Jimmy Blaine, Mrs. Walton Lipscomb, Mrs. Van Dyke Hagaman, Mrs. C. B. Mitchell, Mrs. T. M. Moore, Mrs. John Harter, Sanatorium; Mrs. Ray Biggs, Sanatorium; Mrs. B. J. Marshall, Whitfield; Mrs. Daniel C. Campbell, Foster General Hospital; Mrs. H. F. Garrison, Sr.; Mrs. J. W. Austin and guest, Forest; Mrs. G. H. Butler, Foster General Hospital; Mrs. A. L. Gray, Mrs. P. R. Greaves.

Mrs. Hardie Hays, Mrs. T. B. Holloman, Florence; Mrs. Edmund Horgan, Foster General Hospital; Mrs. I. C. Huggins, Mrs. I. W. Kemmerer, Mrs. H. C. Ricks, Mrs. G. E. Riley, Mrs. J. O. Segura, Mrs. H. R. Shands, Mrs. Felix J. Underwood, Mrs. B. N. Walker, Mrs. Byron Alexander, and Mrs. E. D. Weinman, Foster General Hospital.

TRI-COUNTY AUXILIARY

The Woman's Auxiliary of the Tri-County Medical Society met at Brookhaven on Tuesday, March 13.

Members and guests in attendance included Mmes. O. N. Arrington, B. L. Crawford, W. H. Frizell, W. H. Fairfax, A. B. Harvey, T. F. McDonnell, C. E. Mullins, R. C. Massengale, F. F. Collins, C. F. Dorsey, C. A. Everette, V. L. Hogan, and J. S. Tobias.

Mrs. Frizell presided over the meeting in a very able manner and the following were appointed as chairmen of the various committees: Mrs. Crawford, publications; Mrs. Fairfax, *Hygeia;* Mrs. Arrington, courtesy; Mrs. J. J. Pittman, parliamentarian; Mrs. Dorsey, legislation; Mrs. Everette, public relations; Mrs. McDonnell, research; and Mrs. Mullins, Doctor's Day.

The Auxiliary was glad to welcome Mrs. R. C. Massengale after an absence of five years.

The next meeting will be in Tylertown, June 12.

The age-old war between man and the tubercle bacillus has killed more people than all the wars between nations. After centuries of bondage to this killer, man has begun to free himself in recent years. Although certain biologic and economic factors may have aided, medical science has at least provided control devices which are effective against his enemy.

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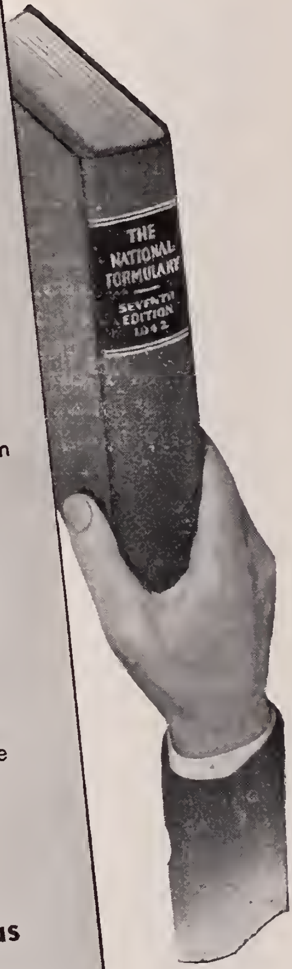

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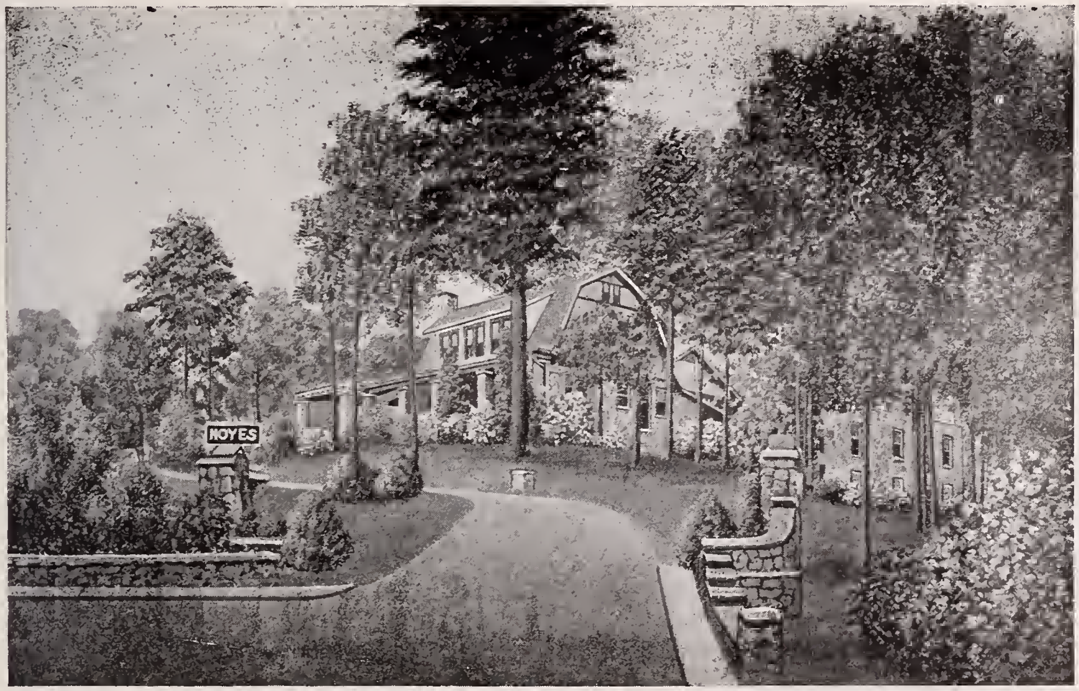

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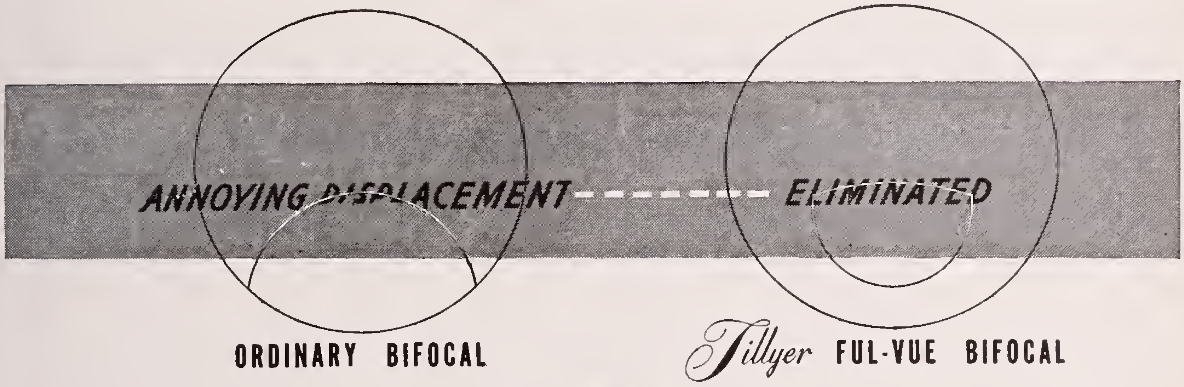
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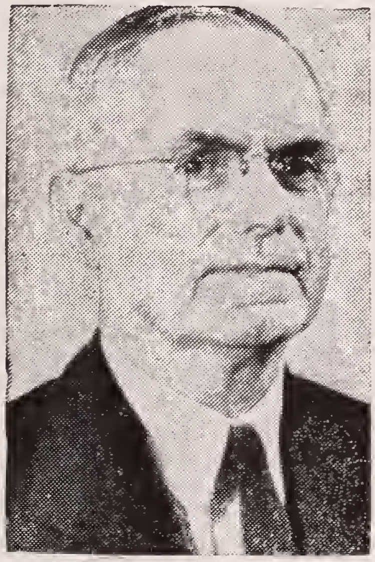
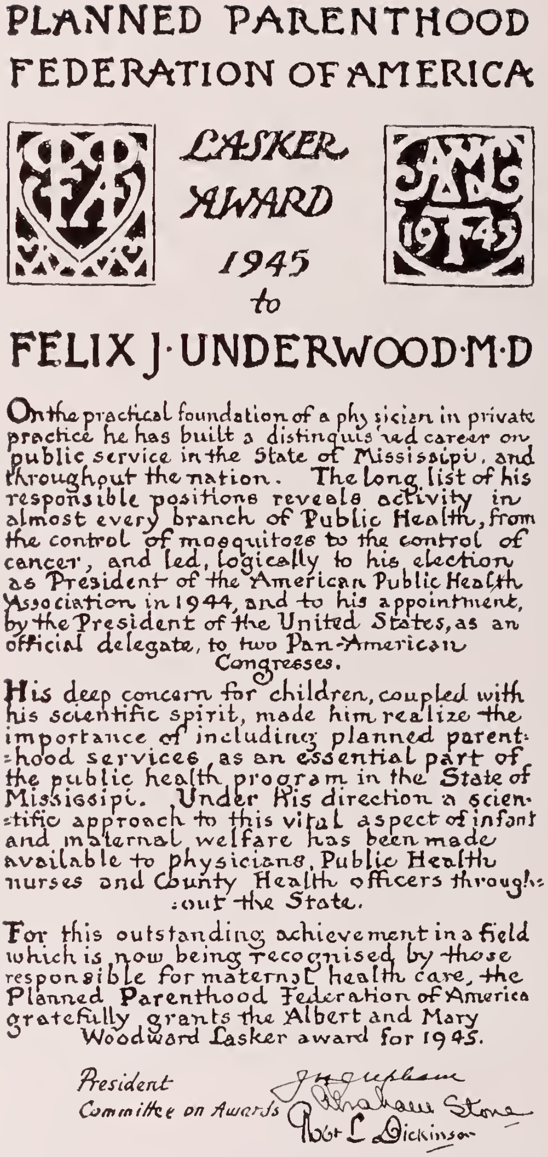
The Mississippi Doctor

BOONEVILLE, MISSISSIPPI, APRIL, 1945 NO. 11



LAMPTON B. CRAWFORD, M.D.
Tylertown, Miss.
President, Mississippi State Medical Association

The state meeting has been cancelled due to restrictions imposed by the war. A meeting of the Council and all officers of the Association has been called for 9:30 A.M., May 8, 1945, in the Robert E. Lee Hotel, Jackson, Miss.



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1945
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On the practical foundation of a physician in private practice he has built a distinguished career on public service in the State of Mississipi, and throughout the nation. The long list of his responsible positions reveals activity in almost every branch of Public Health, from the control of mosquitoes to the control of cancer, and led, logically to his election as President of the American Public Health Association in 1944, and to his appointment, by the President of the United States, as an official delegate, to two Pan-American Congresses.

His deep concern for children, coupled with his scientific spirit, made him realize the importance of including planned parenthood services as an essential part of the public health program in the State of Mississipi. Under his direction a scientific approach to this vital aspect of infant and maternal welfare has been made available to physicians, Public Health nurses and County Health officers throughout the State.

For this outstanding achievement in a field which is now being recognised by those responsible for maternal health care, the Planned Parenthood Federation of America gratefully grants the Albert and Mary Woodward Lasker award for 1945.

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The Mississippi Doctor

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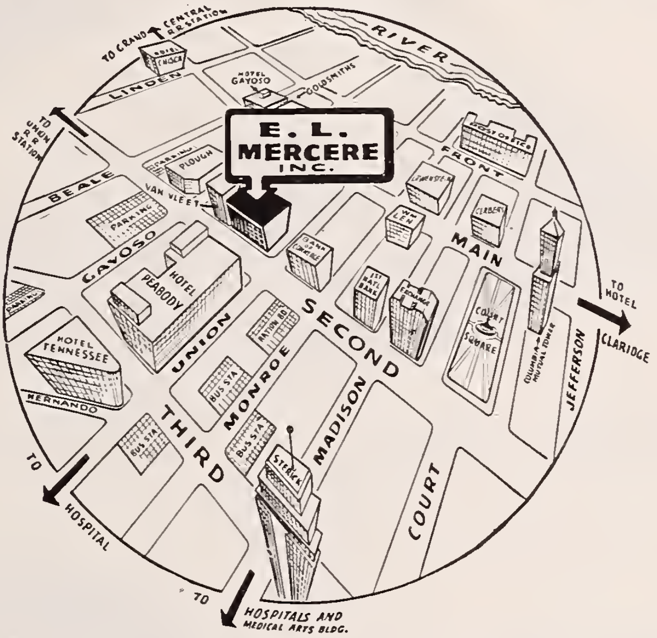
On the Map in Memphis



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1. **SUBJECT:** "Courage and Devotion Beyond the Call of Duty" — on the part of members of the medical profession — in military or civilian practice. Any contestant may portray either the military or civilian aspect of the subject (or both, if shown in one piece).
2. **MEDIA:** The physician-artist's choice of one of the following:
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    2. WATER COLOR, transparent or opaque.
    3. SCULPTURE in any medium.
    4. DRAWING in any medium.
    5. PRINTS, including etching, engraving, lithography, wood block and linoleum block (on paper or cloth).
    6. PHOTOGRAPHY, including bromoil, tinted and kodachrome, as well as photo-montage.

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3. **ELIGIBILITY — See Footnote ★**
4. **DEFINITION — See Footnote ★**
5. **PRIZES: Forty-two prizes, divided amongst the two groups of physicians:**

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No physician may submit more than one piece nor win more than one of the 42 prizes. No physician is eligible for a prize unless he also submits for exhibition at either the 1945 or the 1946 annual exhibition of the A.P.A.A. at least one other original work (not previously exhibited at an A.P.A.A. Exhibition) in any medium, on any subject of his own choice. Prizes will be awarded on a basis of conception and execution, irrespective of medium employed.

6. **JUDGES — See Footnote ★**
7. **EXPIRATION DATE — See Footnote ★**
8. **PURPOSE OF THE COMPETITION:** To memorialize the heroism and devotion of the medical profession in war and peace. All exhibitors (including prize-winners) shall retain ownership of their pieces. It is understood, however, that the A.P.A.A. shall have reproduction rights and also the privilege, for a period of three years after the close of the contest, of displaying prize-winning objects, at art museums, libraries, county medical societies, medical schools, hospitals, and similar institutions for the purpose of enhancing the public's estimate of the medical profession. The Association shall also have the right to offer institutions such as those mentioned above, the privilege of copying any of the prize-winning objects for use as murals, cornerstones, friezes, architectural designs, etc. — for the purpose of memorializing the medical profession's importance in war and in peace.

★ **FURTHER INFORMATION** available on request of the Association's Secretary, Dr. F. H. Redewill, Flood Bldg., San Francisco, Cal., or Mead Johnson & Co., Evansville 21, Ind., U.S.A.

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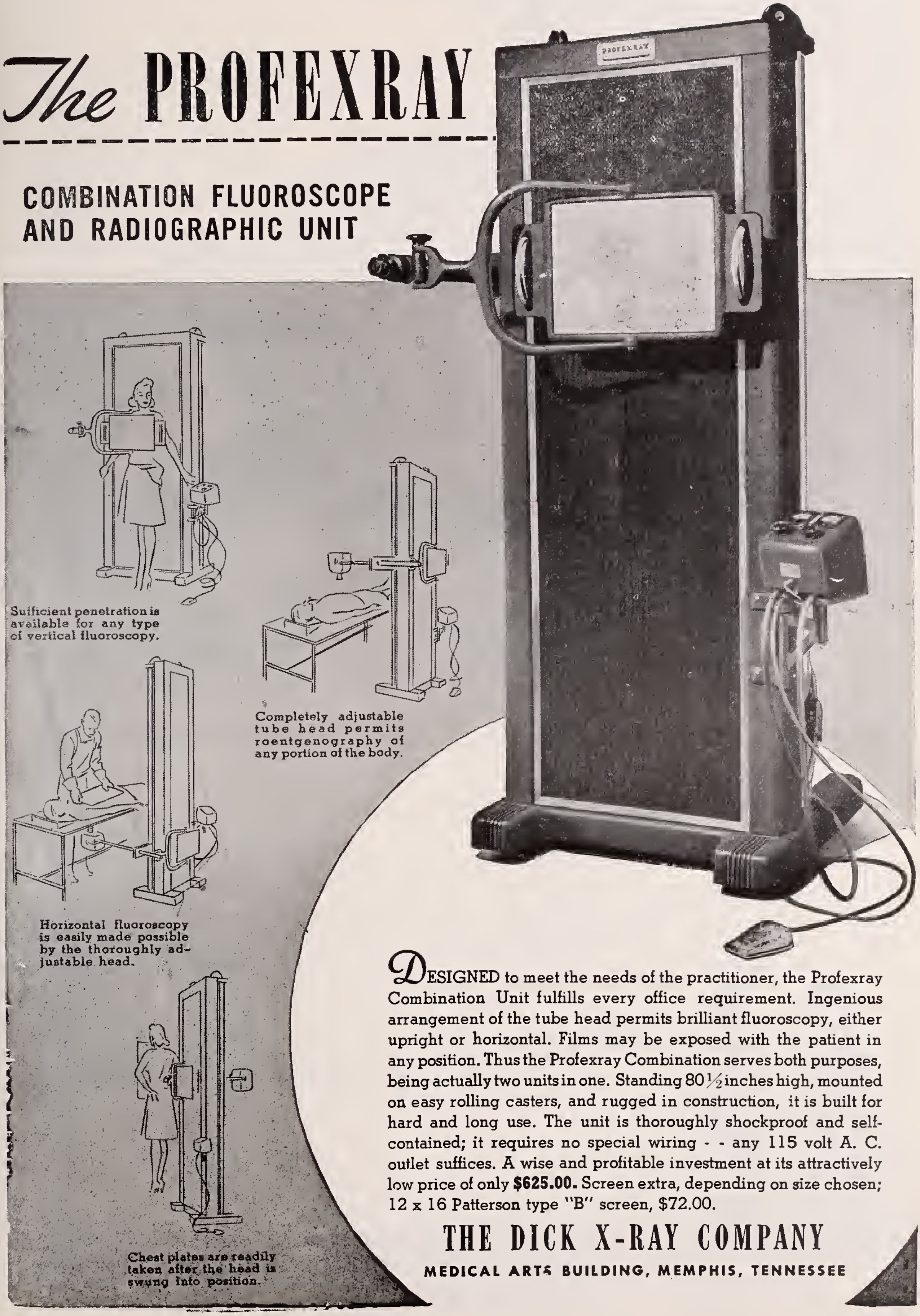

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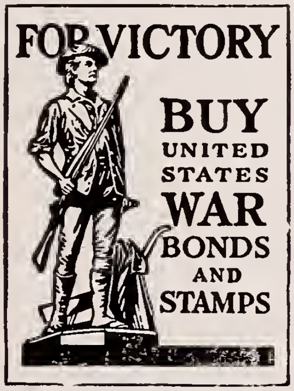

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Plasma is employed to combat shock which so often accompanies battle injuries. Various substitute fluids have been suggested from time to time, but human plasma is most satisfactory. Dried plasma has the advantages of completeness from the physiological standpoint, stability, ease of transportation in large quantities, and rapidity with which the solution can be prepared. Every package of blood plasma processed by Eli Lilly and Company is supplied to the Government at exact cost of production. Plasma prepared by this Company is not available for civilian needs. Eli Lilly and Company, Indianapolis 6, Indiana, U. S. A.

Health Problems in Nutrition*

WALTER WILKINS, Surgeon (R)
United States Public Health Service

Washington, D. C.

NATURE OF THE PROBLEM

This nation is now faced with the greatest and most complex problem in preventive medicine that we have ever had. It is the problem of food and nutrition. There is a task for applied medical science which is as great or greater than the development of sanitation or the control of communicable diseases. Such a broad statement is justified because nutrition is a universal problem, affecting as it does, all of the people all of the time. It involves not merely an attempt to avoid malnutrition. It is much bigger than that. We must be concerned with continued exploration of the possibilities for the application of present and future knowledge toward the attainment of optimum health. In the field of applied nutrition, we are not so much concerned with avoiding something as we are with gaining an objective. In a review article on nutrition and human welfare[1] in 1941, Sir John Orr said, "The new science of nutrition does more than show the way to better health and improved physique. It affords a solution to some of our most difficult social and economic problems. If its exponents speak with the authority warranted by the knowledge which they have acquired in recent years and use all their influence to get this knowledge applied, a review article on nutrition and human welfare ten years hence may be a record of an unprecedented advance in human welfare."

In the practice of medicine the degree of our responsibility for solving a problem is not necessarily in proportion to the magnitude of the problem; it is rather determined by the availability of methods for diagnosis and treatment. The nutrition problem is not only of great magnitude, but is one regarding which much new knowledge is now available. Did Boudreau and Kreuse[2] state the case too strongly when they said, "Too often the application of new knowledge has been long delayed. The forces of inertia have perpetuated the use of technics and methods of work long after the addition of new knowledge should have rendered them obsolete . . ."

In spite of many gaps in our knowledge, nutrition research has provided a body of facts sufficient to enable us to plan for adequate nutrition on a sound foundation. There is no question that a large proportion of the American population exists on suboptimal diets. We have, to some extent, in this country varying degrees of every dietary deficiency known to man.

In the midst of an intensive national program to seek better health through improved nutrition, it might be well to stand back and take an over-all view of certain trends and tendencies which have been occurring over a long period of years. Among these we might point out three in particular.

First: The introduction of great numbers of labor-saving devices during the past century has undoubtedly caused a reduction in the number of calories consumed per capita. Our caloric requirements are determined largely by the amount of work done. Thus, if we were eating the same food, but less of it, our intake of vitamins and minerals would be reduced in proportion to the reduction in calories. We cannot, however, say that the human requirements for all of the accessory food substances are in proportion to the caloric needs.

Second: Another change which undoubtedly has been taking place, since our farm lands were first cleared for agriculture, has been a gradual reduction in soil fertility in some areas. Those who have been thoughtful and foresighted enough to preserve the fertility of their land have been prompted largely by a desire for greater yields and larger harvests—in other words greater output per acre. Until recently little thought has been given to preserving or increasing soil fertility, or to managing the soil, for the sake of producing foods of higher nutritive value.

---

*Presented at the Annual Scientific Assembly of the Medical Society of the District of Columbia, September 30, 1943. Read before the Section on Hygiene and Public Health at the annual meeting of the Mississippi State Medical Association, May 9, 1944.

Thus, we have been more concerned with quantity than with nutritional quality of the food produced. The extent to which the reduction of soil fertility affects the health of people is yet to be determined. However, this question is attracting more and more attention. Also there is interest in the breeding of plants for superior nutritive value.

Third: All of us have been conscious of the tendency toward more and more refinement of food. We say refinement because of current usage. The connotation is that refinement produces finer food. Unfortunately, so-called refinement usually lowers nutritive value, even though cooking qualities and appearance may be improved. For example, our national per capita consumption of refined sugar 100 years ago was about twelve pounds annually. By 1930 this had shown a ten-fold increase to 120 pounds. In terms of calories, this meant an increase from sixty to 600 calories per capita per day. While the total number of calories eaten has decreased, the consumption of refined sugar, which is devoid of vitamins and minerals, has greatly increased.

These three trends—reduction of caloric intake, decreased soil fertility, and "super-refinement" of food—have been singled out for special emphasis to call attention to certain pitfalls which gradually have become increasingly dangerous. In spite of these and other tendencies on the debit side, there are certain trends which might, to some extent, compensate on the credit side. One of the greatest steps taken on a national scale, as a part of the National Nutrition Program, has been the enrichment of certain foods, including flour and bread. Four Southern states have already enacted legislation providing for the enrichment of bread, flour and margarine. Two of these states have also passed bills providing for the enrichment of degerminated corn meal. Such progressive and forward looking legislation provides a tangible and definite approach to better health through nutrition. It seems that any danger in such procedures would be only in the assumption that they can solve all of our nutritional problems.

To look on the simple side of this complex problem of nutrition, the human body has certain elementary and basic requirements which must be met, if life is to continue. Among these are an adequate supply of oxygen and an adequate supply of water—both of which we take for granted. Also the proper running of the human machine requires a great variety of other substances. Some are taken in the form needed, some are synthesized in the body from simpler substances, and some are broken down from more complex substances. It does not seem unreasonable for the body to require a variety of materials for sturdy structure and efficient functioning. That is true even in building, maintaining, and repairing a house or an automobile. In addition to materials needed for body structure, hormones, and enzymes as well as vitamins and minerals, are among the many substances needed for regulating body processes. But in any case, all of these must be supplied, either directly or indirectly, by food materials.

We have all heard this: "How did we manage to get along before we knew about vitamins and had all of these new fangled notions about food? What was good enough for grandpappy is good enough for me!" The point is this: while grandpappy was living to the ripe old age of ninety, thousands of potential grandpappies were filling small and untimely graves in community churchyards. Many of the health hazards of that day were unrecognized, but this made them no less dangerous. Knowledge releases us from the rule of chance and gives us a rational guide to health and longevity.

We must remember that blood circulated before Harvey discovered the fact in 1628. Vitamins existed before Funk gave them that name in 1912. Much new information concerning the structure, function, and efficiency of the circulatory system has been added since the days of Harvey. In the same manner, modern research has added much to our knowledge of the vitamins and other food essentials. Just as blood circulated before Harvey's discovery, so we consumed vitamins before we knew they existed. The last 300 years have not revealed the whole story regarding the circulatory system—its physiology and pathology. Likewise the past thirty years have left many nutrition problems still unsolved.

MALNUTRITION—A GROUP OF DISEASES.

In the classical deficiency diseases, usually some one deficiency predominated to such an extent that the entire condition was attributed to that single deficiency; for example, pellagra, scurvy, rickets, etc. As our diagnostic methods improved, we began to obtain more satisfactory diagnoses. In some instances symptoms which were usually present with a recognized deficiency, and formerly had been attributed to that deficiency were found to be due to concurrent deficiencies in other nutriments. For example, it was found that certain signs around the mouth which are often seen in pellagra patients are due, not to niacin deficiency, but rather to lack of riboflavin.

Malnutrition is not a single disease. Etiologically, it is more like a group of diseases superimposed one upon the other. Rarely, if ever, outside of research laboratories, do single deficiencies exist. Almost every case of malnutrition is a combination of deficiencies with one or more predominating. This is usually true even in the mildest forms of malnutrition where people are getting almost enough, but not quite enough, of several nutritional essentials. There are all degrees of deficiency which appear in an infinite number of combinations.

The fact that malnutrition is "a group of diseases" would naturally lead us to expect a rather wide variety of signs and symptoms. Such is the case. Certain syndromes have become well known, even though there remains some confusion because of the overlapping of multiple deficiencies. As one would expect, the manifestations of milder conditions are usually less pronounced and often least specific. Also they are more likely to be due to disturbances in function than to gross organic or anatomical changes. In fact, it is only within recent years that many such signs and symptoms have been recognized as manifestations of inadequate malnutrition. The fact that many of these signs and symptoms are non-specific when considered alone has made differential diagnosis rather difficult. Deficiency diseases, as a group, have been popularly referred to as hidden hunger. They are hidden in the sense that their manifestations often are not recognized as "hunger signals."

NUTRITION—A PROBLEM IN PREVENTIVE MEDICINE.

The American public is gradually learning to appreciate the value of the physician as a guide and councillor in matters pertaining to health as well as a "very present help in time of trouble." In the past, the physician was called upon only in emergencies. He was expected to accomplish dramatic results when everything else had failed—and that is what he did. He had too little opportunity for health guidance of his patients. His opportunity to use his knowledge of nutrition was largely confined to prescribing diets for babies and sick people. Formerly, the expression, "He put me on a diet," meant that something was radically wrong and necessitated drastic changes in food intake.

Fortunately this attitude is changing toward the more efficient and effective use of the doctor's special training. "See your doctor twice a year" is becoming a habit with some people and does not automatically label them as psychoneurotics or hypochondriacs. Thus, the popular demand for the practice of preventive medicine by the physician is gradually increasing.

In the field of nutrition, we have an opportunity to carry the concept of preventive medicine a step further than has been done in the prevention of clear-cut disease. We must strive toward the highest health levels which are possible of attainment. Freedom from obvious disease is not enough. The whole range of health levels, from fatal disease states, on one hand, to buoyant health on the other, is greatly affected by the food habits of the individual. While poor nutrition can, and often does, contribute to mortality, optimum nutrition can contribute to that state of health which is even better than average—that extra portion of good health that some individuals have. Nutrition, good or bad, makes its contribution to all grades of health status. Poor malnutrition can kill us, while optimum nutrition can take us far on the way toward optimum health.

We would not say that good nutrition guarantees good health, but we can say that optimum health is impossible in the absence of good nutrition. Thus, nutrition is a fundamental factor upon which many other factors are conditioned.

HEALTH YARDSTICKS.

Unfortunately; we cannot say with finality that a certain percentage of the people in the United States is well-nourished and a certain percentage is malnourished. The malnutrition found by any one worker depends on his knowledge of it, the thoroughness with which he searches for it, and the yardstick by which he measures it. Requirements for specific nutriments vary from one group to another, from one individual to another, and even in a single individual under different conditions. Then, too, malnutrition is a generic term applied to a group of diseases, not to a specific disease entity with a single causative agent. Also we recognize borderline states of inadequate nutrition which hardly warrant the term disease in the ordinary sense. Such states have been referred to as suboptimal nutrition.

The range between severe deficiency disease and optimum nutrition is wide, and any divisions into levels must necessarily be arbitrary. We can no more draw a line and say "at this level malnutrition ends and good nutrition begins" than we can say "at this level a person ceases to be poor and becomes rich." For practical purposes we might think of nutritional status in terms of zones, which merge or blend into each other as do the colors of the rainbow. For example:

1. The danger zone, including nutritional states varying from full-blown deficiency diseases at one end through different levels of poor nutrition, gradually blends into the subsistence zone.

2. In the subsistence zone, we find fair nutrition at one end ranging to moderately good nutrition at the other. This blends into the optimal zone.

3. In the optimal zone the range is from good to best.

Certainly, morbidity and mortality tables have not reflected the magnitude of the nutrition problem in our national health economy. In fact, it seems likely that "dietary inadequacy" is so common in the United States as to be considered "normal" or average. Jolliffe, McLester, and Sherman[3] concluded in a recent summary, "The evidence at our disposal warrants the conclusion that dietary inadequacies and malnutrition of varying degrees are of frequent occurrence in the United States and that the nutritional status of an appreciable part of the population can be distinctly improved. If optimal nutrition is sought, not mere adequacy, then widespread improvement is possible." To quote the authors further, "Some types of malnutrition are: 1) strikingly obvious to everyone, 2) some are apparent only to the physician who looks for them, and 3) some are evasive even to the careful observer using the most accurate specialized technics.

If the first group alone is counted (those strikingly obvious to everyone), the prevalence of malnutrition will be recorded as low, almost negligible. If the second group is counted (those apparent only to the physician), then the rate will be high. If the third group is counted (those evasive and elusive even to the careful observer), then the rate will be sufficiently high to cause genuine concern."

The fact that average longevity has increased should not give us a false sense of security. A large factor has been a great reduction in infant mortality. Also, while increased longevity may in a very general way be related to the health level of the population, we cannot accept it as a valid criterion for measuring health levels. Paradoxically enough, with our birth rate decreasing (exclusive of the wartime stimulus) and our average age becoming greater, our "average health level" may be actually decreasing. It is significant that the percentage rejections of selectees for military service increases markedly with the increasing age of those examined.

The question remains, to what extent, if any, does our gradually increasing longevity reflect the average health level of the population as a whole? A more important question is, to what degree does our national health reflect the progress that has been made in the medical sciences during the past few decades? To what extent have we as a nation approached our potentialities based on present knowledge? In other words, to what extent are we as a nation using what we know in regard to health conservation and improvement?

Most assuredly, from a nutritional standpoint, measured by the yardstick of our potentialities, we have little to be proud of. What we have done, measured in terms of what we could have done, reveals puny progress of which we should be thoroughly ashamed.

MALNUTRITION INCOGNITO.

Malnutrition has been classified in various ways and to different degrees. Etiologically, malnutrition has been divided into two general types: 1) Primary (malnutrition) or malnutrition resulting from inadequate intake of dietary essentials, 2) conditioned (malnutrition) or secondary malnutrition which is brought about by changes in the individual human economy or by factors other than dietary intake. To these two we might add a third which etiologically may overlap one or both of the above but which, practically speaking, would aid in our appreciation of the problems of hidden hunger. This is **malnutrition incognito**, by which we mean malnutrition existing in an individual but over-shadowed and obscured by some more obvious abnormality which claims our attention. In retrospect, the cycle of the old method of treating typhoid fever might be cited as one example. The sequence often went as follows: malnutrition plus typhoid infection plus treatment by an extremely limited diet—the total result being attributed to the typhoid infection alone. Contrast this with the modern treament of typhoid fever where great emphasis is placed on meeting the nutritional requirements of the patient.

What we have learned about tuberculosis serves as another example. Here is an infectious disease to which malnutrition is often a predisposing factor. The infection itself then produces a secondary state of malnutrition by upsets in the metabolic processes and the nutritional requirements. We learned that good nutrition plays an important part in the successful treatment of this disease, for which as yet we have no satisfactory immunizing technic or specific therapy. In the light of our present knowledge, it is easy to look backward and censure ourselves, but the important question is this: To what extent have we unmasked malnutrition incognito and to what extent is it still doing its dirty work unrecognized?

We have often engaged in controversies as to whether certain nutriments had any specific inhibitory effect on certain pathogenic organisms. Too often we have overlooked the practical fact that, regardless of its modus operandi, good nutrition is a basic physiologic requirement, which, to the degree neglected, leaves the human body to that extent devitalized, in addition to the debilitating effects of other diseases which are superimposed. Probably, with reasonable accuracy in diagnosis, uncomplicated severe malnutrition rarely masquerades as other diseases. The danger lies in our overlooking less obvious malnutrition which is complicated, and often exaggerated, by concurrent pathology. This is a practical point in diagnosis which cannot be too strongly stressed.

In the treatment of any disease we would do well to remember those fundamental physiologic requirements which exist and which may be altered by the presence of disease. With a large percentage of the population admittedly existing on suboptimal and marginal diets, would it not be possible to increase our therapeutic successes by giving more attention to known nutritional requirements as one of the first steps in therapy?

WHEN IS A DIAGNOSIS COMPLETE?

Differential diagnosis in the field of nutrition has improved greatly in the past few years. The clinician now has at his disposal a greater armamentarium of facts concerning the relationship of signs and symptoms to specific deficiencies. Indications are that much additional progress will be made in this field in the years immediately ahead.

In malnutrition the etiologic agent, so-called, is thel ack of something rather than the abnormal presence of something. The lack may be due to an intake below normal requirements, increased needs, or there may be factors which interfere with efficient utilization. in any case, we have made only the first step in the diagnosis when we learn "what" is lacking. The important question is why. Thus, while we must determine the immediate cause, we must then begin our search for the underlying factors which are basically responsible for the condition; in other words "Why?" It is toward these underlying causes that effective corrective measures must be directed. While acute conditions often require heroic measures, the average case of malnutrition is of a chronic nature and the corrective measures may seem rather hum-drum and undramatic to the patient and the doctor. The condition is often intimately associated with, or due to, food patterns and habits of longstanding which are hard to change.

Usually there is no strong motivating influence of the type generated by an emergency situation. Thus, a régime must be set up based not only on what would be good for the patient under ideal conditions, but also considering what he is likely to do under existing conditions. Not forgetting the difficulties in differential diagnosis of nutritional status, probably the most difficult part of the whole process is to get new food habits established and to make them stick.

NUTRITION AND PUBLIC HEALTH.

Public health as a medical specialty has made significant prograss along a number of lines. Not the least has been in the field of communicable diseases. No small part of its progress in that field has resulted from two types of approaches to the problem:

(1) Collecting, correlating, studying, interpreting, dispensing data and information, and
(2) Directing its efforts toward underlying factors having to do with prevention.

Compared with development of communicable disease control, public health agencies have done little in the field of applied nutrition (not overlooking certain notable exceptions).

While public health early and clearly defined its method of attack in regard to some of its classical problems, its role and service in respect to nutrition have remained largely undeveloped and ill-defined. Boudreau and Kreuse[2] in 1938 deplored the fact that "the tax supported agencies entrusted with the care of the public health have been in this respect the victims of inertia and tradition." Fortunately this condition is improving. The more progressive health departments are now recognizing nutrition as a public health problem which, however, cannot be solved by official health agencies alone.

What is the one great contribution that public health can make in the field of nutrition? We can find the answer in the methods used in the successful approach to the communicable disease control problem. In this case, public health departments would collect, correlate, study, interpret, and furnish information concerning the types, extent, severity, and distribution of malnutrition. Then doctors, dentists, nurses, nutritionists, teachers, agricultural workers, and others could attack different aspects of the nutrition problem much more effectively, with far larger forces, and on a much wider front. We must mobilize our forces for a more effective attack on this problem. It is all but a national disgrace—and, considering our potentialities, it should not exist in the United States.

As a nation, we must realize that good nutrition is essential to good health. We must work together, not only in our struggle against malnutrition, but to attain that extra measure of good health which will lift life and happiness to higher levels than the world has ever known.

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Facts about Anesthesia*

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Each day in every phase of medicine we meet emergencies of some sort. In order for us to meet these emergencies we must accumulate experiences that will at these times enable us satisfactorily to bridge these recurring emergencies. Anesthesiology, although considered a new specialty in medicine, is in reality a very old one. It has been only the past few years that interest has developed in this particular line of medicine to the extent that it is now considered a specialized branch. Subsequently, among anesthetists many emergencies are constantly arising that will tax their resources greatly. The welfare of the patient is always uppermost in their minds. It is the anesthetist's job to put the patient where the surgeon can best do his job.

The type of anesthesia and the technique of administration must be governed by circumstances, such as the condition of the patient and type of operation. As yet there has not been known any type of anesthetic agent—nor any technique of administering the agent—that we might call universal. However, laryngeal intubation is a permanently established technique and is notable because of its ever-widening field of safety and usefulness. I should like to discuss laryngeal intubation as a valuable adjunct to anesthesia. **Endotracheal** and **intratracheal** are two terms identifying the same type of anesthesia. George James Thomas, M.D., director of anesthesia, University of Pittsburgh Medical School, has suggested using the terms endotracheal for the type of anesthesia where the tube is passed through the mouth and into the nose and upper part of the trachea. He uses the word intratracheal for the type of anesthesia where the tube is passed through the mouth and into the middle of the trachea. I prefer using the term intratracheal rather than endotracheal unless the type of operation would preclude the use of the former. Thus with the inference clear and for the sake of clarity and avoidance of confusion I shall use the term intratracheal.

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ADVANTAGES OF INTRATRACHEAL ANESTHESIA

1. Perfect ventilation. There is no tax on the respiratory mechanism of the patient, respirations being under control and unhampered-

2. Consistent light and even anesthesia.

3. The protection of patients against the entry of blood, mucus, and other materials into the trachea.

4. Breathing is quiet. Abdomen more relaxed than in any other form of anesthesia.

5. Intratracheal anesthesia to make artificial respiration possible. Therefore, it is wise to use it in cases where respiratory failure may occur, such as in basal brain operations, also operations upon the heart and pericardium.

6. Tracheal and bronchial aspirations can be performed in thoracic operations without interference with anesthesia.

7. The operative field is free of the anesthetist and his paraphernalia.

DISADVANTAGES OF INTRATRACHEAL ANESTHESIA

1. Since instrumentation is required, there is danger of trauma to the teeth, lips, soft palate, epiglottis, vocal cords, and other tissues in that region. This can be avoided by development of skill in intubation.

2. The presence of intratracheal tube in the mouth may encroach on the surgical field in pharyngeal operations.

3. Danger of trauma to cords and other tissues in that region during extubation. This can be avoided by giving more anesthetic before extubation, or when any signs of resistance are noticed during removal of the tube.

INDICATIONS FOR INTRATRACHEAL

(1) Intrathoracic operations, in order to prevent the collapse of the lung; or confining the anesthetic to one lung and maintaining the other lung in a state of collapse; (2) intra-oral operations, e. g., excision of the tongue, removal of the lower jaw, cleft palate, etc.; (3) operations on the trachea and larynx; (4) operations around the trachea, where there is danger of collapse of the trachea from external pressure; (5) operations about the head and neck in general; (6) in cases where vomitus may collect in the upper air passage, as in emergency operations for intestinal obstruction; (7) in prolonged operations, and with cachectic individuals. Shock seems particularly rare in patients anesthetized by this method; (8) in orthopedic and neurosurgical procedures, both to maintain anesthesia and an adequate airway when patient is in the prone position, and (9) when previous experience with the patient or the history suggest laryngospasm occurring.

CONTRA-INDICATIONS FOR INTRATRACHEAL

1. Poor risks. Cases where instrumentation and trauma may be a hazard.

2. Acute inflammatory disease or growth in the larynx or other surrounding tissues.

3. In toxic thyroid disease, (except when pressure upon the trachea causes respiratory embarrassment).

The above outline of the advantages, disadvantages, indications, and contra-indications of intratracheal anesthesia is taken from *Technique in Endotracheal and Intratracheal Anesthesia,* by George James Thomas, M.D.

In order for an anesthetist to assume the maximum responsibility that is placed on him —particularly in private practice of anesthesia —certain favorable conditions should exist. Time element and proper equipment are necessary and complete understanding and coöperation between the anesthetist and the surgeon should exist. All these factors will together help to insure a resulting anesthesia that is gratifying to the anesthetist and to the surgeon.

There is no short cut to successful intratracheal anesthesia. A certain length of time with the proper equipment is necessary if it is to be accomplished successfully and satisfactorily. There is one factor which will vitally affect the time element—namely, that of proper pre-anesthetic medication. Routine orders for pre-medication must be avoided. A careful evaluation of the patient must be made. In doing this the age, sex, weight, emotional status, and history of previous operations or anesthesias must be carefully considered. Mention here may not be made of the type of premedication to use. Many anesthetists are at variance. And many get the same results with different drugs. I am satisfied that the careful evaluation of the patient before the medication is ordered will explain this. The amount as well as the length of time before induction is started that the drug is given is vitally important. This, too, of course, ties in with the evaluation of the individual patient. Even a strict adherent to administration of a particular drug as a preoperative medication will sometimes see fit to make an exception in certain cases. A patient who is preoperatively over-medicated may be as difficult to induce and as unsatisfactorily anesthetized as one who is preoperatively under-medicated. From a standpoint of anesthesia the most favorable procedure is on in which there is smooth induction to a point where pharyngeal reflexes are not elicited, pharyngeal suction may be carried out and teeth may be easily separated by the anesthetist's fingers to permit intubation. Before intubation is attempted suction, if necessary, should be applied to relieve the pharynx of all fluid, saliva, and vomitus. All removable false teeth, bridgework, etc., should be removed before induction is begun.

The stages and planes of inhalation anesthesia are recognized and defined by various clinical symptoms and physical signs which we refer to as signs of anesthesia. The relative duration of the stages of anesthesia and appearance of the signs are fairly constant depending on the agent used. But we must take into consideration this fact—every case is a law unto itself. Each case—tritely but correctly speaking—is individual. No set of stages or signs is constant. This is further evidenced by the type of medication used, the patient's condition, the type of anesthesia, and also by the technique by which the anesthetic agent is administered. The stages of anesthesia are of academic rather than practical interest. The signs are of great practical value and are used by any conscientious anesthetist. Anesthesia is divided into four stages. They are briefly: I. Analgesia—used most in obstetrics and sometimes in dentistry and minor surgery. II. Delirium—of no practical value; as a matter of fact, it is the danger stage where physical violence and cardiac ventricular fibrillation might occur. III. Surgical—the stage in which the depth of anesthesia is brought for surgical procedures. This stage is the practical stage of anesthesia. IV. Respiratory Paralysis —when central respiratory paralysis and cardiac failure ensue unless patient is quickly brought out. The third stage, because of the four planes of anesthesia within, is interesting. With the various signs and symptoms and under good conditions an anesthetist may put a patient into any of these stages as he wishes. The value is that during the performance of certain operations the depth of anesthesia may be lightened or deepened as is necessary.

In inhalation anesthesia where intubation is performed the signs are of particular interest and inestimable value. It is quite true that respiration and color are of the utmost value. However, here are some types of agent with which we can make little use of color at all to determine the depth and condition of patient. It is at this time that we should note respiration as a major index to depth of anesthesia and condition of patient. Here we may find that correlation of the respiratory status and eye signs are indispensable.

It is true that cases cannot be selected, but the type of anesthesia and technique of administration should always be carefully considered. I feel that if we follow this procedure before inducing a patient that more satisfactory anesthetization will result and fewer deaths under and following anesthesia will occur.

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Infections of the Hand*

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In choosing such a subject for discussion I realize that only a few high points might be brought out and that books have been written on the subject, but to stimulate new interest and thought along such lines is my aim.

Regardless of one's type of practice the problem of the infected hand arises. Such men as Kanavel and Koch and their co-workers have passed on to us knowledge that if used intelligently, will give us good ideas as well as gratifying results regarding the treatment of hand infections. Years ago prior to the work of these great men many hand infections were treated in a rather aimless haphazard manner. The evaluation of pus at fluctuant points constituted the main principle of treatment regardless of type of infection and consequently a great many minor injuries and infections became major ones, resulting in crippling deformities and even an occasional fatality.

The economic aspect of severe hand infections and the loss of time from essential types of work are by no means the least important factors to consider. The doctor's responsibility is great when it is realized that the treatment rendered the patient may mean the difference between a self-supporting useful citizen and a cripple who becomes a problem for the rehabilitation experts or a burden to society.

The hand may be likened to a forcep, the thumb forming one blade and the fingers the other blade. The intricate movements of the hand depend on numerous joints, ligaments and tendons. Since the structures depend upon a smooth surface in performing their individual function, it is readily seen that any injury or disease that affects the smooth surface of these organs would materially interfere with the function of the hand. These structures are prone to respond to irritation and inflammation by forming adhesions of fibro-connective tissue.

Infections begin in many ways, the most common being from "hang nails" and puncture wounds—through these avenues of entry the organisms are implanted at the end of a long, thin tract in which the natural flushing of protective serum is impossible. Lacerations and incised areas in the hand are more likely to develop infection than are other areas of the body with similar wounds. Too, the blood stream must be considered a potential avenue for entrance of microörganisms into the bone and soft tissues of the hand. It is of great importance to be aware of the possibility of diabetes or other systemic condition when infections of the hand occur without apparent cause.

In the consideration of infections, four factors are important: the exact site involved, the type of organism responsible, possible complications and the presence or absence of systemic disease. It is necessary to know that certain organisms have a predilection for certain types of tissues, as well as their characteristic growth and mode of extension. Staphylococcus more commonly causes a localized process while streptococcus prefers the fibrous tissues of the pulp of the finger, the eponychial and paronychial tissues, periosteum, and bone. Streptococcus prefers synovial type of tissue like the tendon sheaths and joints or loose cellular tissue like the dorsum of the hand and forearm. Management of these cases, then, depends upon the location and the type of infection present. Correct treatment of a cellulitis or lymphangitis, for example, is markedly different from the treatment of a felon or paronychia. If the infection is localized, drainage is indicated; but if there is a spreading infection, conservative treatment must be employed and surgical intervention is definitely contraindicated.

The doctor dealing with hand infection is confronted with the problem of early diagnosis, proper drainage with elimination of infection, and restoration of function. Complications to be avoided are contractures, loss or impaired function, and extension of the infection.

Early diagnosis followed at once by the proper treatment usually affords excellent results. It should be remembered that more errors are made in delay and caution than are made by too radical treatment. Delay, when drainage is indicated, allows a minor condition to become a major one. With the exception of the caution to be used in streptococcal infection, the hand in infectious processes should receive energetic treatment as soon as diagnosis can be made. Most urgent of all are the cases of tenosynovitis.

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*Read at Northeast Mississippi Thirteen Counties Medical Society, Amory, Miss., Sept. 12, 1944.

The common localized infections of the hand are felon, paronychia, carbuncle, furuncle, and collar-button abscess. Grouped under the headings of septic hand are tenosynovitis, radial and ulnar bursitis, lymphangitis and abscess of the fascial spaces.

A felon is an acute suppurative inflammation confined to the distal closed space. The fibrous septa of this space shut off the terminal phalanx from the rest of the finger and a surprising degree of tension may develop and may thus interfere with the blood supply. This condition usually begins as a sticking pain in the tip of the finger, this pain soon developing to severe throbbing and the finger tip becoming extremely tender, swollen and red. Almost typically there is a history of inability to sleep on account of pain. One should not wait for fluctuation. Delay in drainage may result in osteomyelitis of the terminal phalanx. Following drainage, a splint should be applied and the hand elevated.

Onychia or paronychia is an inflammatory process at the root of the nail. There is local redness, tenderness and pain. This may develop into a more chronic form, the common "run-around." In rarer cases, infection penetrates beneath the nail, elevates the nail and exudes pus from beneath the edge of the nail. Incision should be made along the side of the nail, care being taken to avoid cutting into the nail bed. More severe forms require incisions on both sides of the nail and dissection of the skin from over the root of the nail to expose the abscess. In case of abscess beneath the nail, the involved portion of nail is removed, leaving the distal portion to cover what with total removal would be an extremely tender area.

Collar button abscess is a subepithelial suppurative process which often arises in a hair follicle and there is inward extension through deep fascia. Because of this extension, an incision through the skin only will not provide adequate drainage. Longitudinal incisions through deep fascia promote good drainage and healing.

Furuncles and carbuncles of the hand are no different from these lesions in other locations and should be treated by incision as indicated.

Tenosynovitis or infection of the tendon sheath is a most urgent surgical condition. Early diagnosis with incision along the side of the finger should be done at once to prevent extension of process and to avoid permanent disability of the involved finger. Extensions, because of the anatomical relations, are more likely in inflammation of the thumb and little finger. The cardinal symptoms of tenosynovitis are extreme tenderness along the tendon sheath, position of flexion, and exquisite pain on extension. Evidences of extension of inflammation depend, of course, upon the site to which the process has extended. Infection of the radial bursa commonly follows delayed drainage of a tenosynovitis of the thumb. Tenderness and swelling occur along the tendon and toward the middle of the wrist and just above the annular ligament. In extension of an infectious process from the little finger into the ulnar bursa, there is edema of the hand, especially marked on the dorsum. General fullness of the palm is found but the palmar hollow is still seen. Because of the looseness of the tissue, the greatest swelling will likely be just above the annular ligament of the wrist. There is, of course, exquisite tenderness in the newly involved area. Extension may occur directly from the ulnar to the radial bursa or from the radial to the ulnar. Rupture of the tendon sheath of the index finger causes spillage into the thenar fascial space while rupture of the tendons of the middle and ring finger contaminates the middle palmar space. Rupture of the ulnar bursa also may infect the middle palmar space.

For drainage of the radial or ulnar bursa, incision may be made in the palm directly over the bursa involved.

The middle palmar space and thenar are often contaminated directly by puncture wounds, or by extension as already described. Constitutional symptoms are to be expected from such an enclosed area of suppuration. Fever of 103 degrees is not uncommon and there is prostration and restlessness. Marked pain and tenderness are the local manifestations. When the middle palmar space is involved the palmar hollow is lost, and there is edema in the webs of the fingers on the involved side of the hand, and edema of the dorsum of the hand. Extension into the wrist may result in abscess formation between the pronator quadratus and the long flexor tendons. The site of incision for middle palmar space infection should center upon the point at which the middle palmar crease crosses the narrow area between the metacarpals of the middle and ring fingers.

Involvement of the thenar space may come from direct contamination from a puncture wound or by means of extension as has been described. Constitutional symptoms are the same as for middle palmar space infection. The thenar eminence is distended and there is brawny induration and redness. There is thickening of the hand, edema of the dorsum and edema of the web of the thumb as well as tenderness over the involved area. Pus lies both anterior and posterior to the abductor muscles of the thumb so this space should be incised on both the palmar and dorsal surfaces. Incision on the palmar side is made at the ulnar side of the thenar eminence about opposite the metacarpo-phalangeal joints and emerges upon the dorsum, at the same level. Drainage of an abscess in the wrist is obtained by incision on either the radial or ulnar borders of the forearm.

Lymphangitis and cellulitis cases are decidedly different from the localized processes that have been described. These are streptococcal infections and if septicemia and fatality are to be avoided, very conservative treatment must be employed. Lymphangitis is a spreading infection involving the lymphatic vessels, spread occurring proximally along and lymphatics to the regional nodes. The hand or forearm is found to be swollen and painful and particularly tender along the course of the lymphatics. Red streaks may be visible along the lymph vessels. The general condition of the patient is high fever, marked malaise; elevation of pulse rate and prostration. Cellulitis is a diffuse involvement not limited to the lymphatics. There is swelling, brawny induration, pain and tenderness but the systemic reaction is usually slight. Surgery is absolutely contraindicated in both lymphangitis and cellulitis. Rest in bed, forced fluids, immobilization, elevation, hot packs and specific chemotherapy are indicated. Incision is made only when the infection has definitely localized.

A few general rules of value in treatment of infections should be observed. General anesthesia is often best in drainage of the hand. Incisions must be deliberate and thorough and vital structures must be avoided. This is not often possible under local anesthesia. Too, the dangers of local anesthesia in causing spread of infection and in further distending an area already distended to the point of throbbing can not be ignored. Sodium pentothal or nitrous oxide are usually satisfactory for anesthesia.

A bloodless operative field is a prerequisite to good surgery. Poor results are often due to the attempt to work at a point where the field cannot be clearly visualized. An Esmarch bandage makes an excellent tourniquet.

In making incisions there should be two objectives—adequate drainage and good function with good cosmetic results when healing has taken place. Hence, incisions are not to be made directly over tendons or joints if they can be avoided. A curved incision is preferable to a straight one because the former will remain open for drainage while the straight incision often closes before drainage is complete.

Hands with any but the very slightest of infections should be splinted following operation. This, combined with elevation and hot packs, relieves the pain and aids localization of the process. In applying any dressing, neatness should be sacrificed for comfort and utmost care must be taken to avoid secondary infection.

Severe infections should receive treatment directed to restoration of function as soon as the acute stage has passed. When the acute inflammation has subsided, passive motion, massage, heat, and active motion should be the closely followed therapeutic agents.

Give.. TO CONQUER CANCER

Acute Laryngotracheobronchitis*
REPORT OF A CASE

THOMAS C. NAUGLE, M.D.

Columbus, Miss.

DURING THE past six or eight years a symptom complex, unrecognized before, has come to be regarded as acute laryngotracheabronchitis. It occurs most frequently in children under two years of age and is seen in the form of an acute infection of the upper respiratory tract which in a short time involves the larynx, trachea and bronchi.

The pathologic picture is one of acute inflammation of the larynx and tracheobronchial tree. In the early stages there is marked edema of the mucosa and submucosa. Mucus glands are markedly hyperactive causing a profuse mucorrhea with numerous leukocytes coming from engorged blood vessels. This profuse discharge often causes complete blockage of the already reduced lumen. Later in the disease, crust formation is evident. Some of this is undoubtedly due to lack of moisture in air aspirated through the tracheotomy tube, but even in cases requiring tracheotomy some crusting is seen.

As usually seen the history is of a child who has had coryza for several days with or without fever. Rather suddenly he develops a croupy cough and some stridor. If the disease progresses, the typical picture is seen of high fever and acute laryngeal obstruction with marked stridor, indrawing of the suprasternal notch and respiration with all of the accessory muscles of respiration coming into play. After tracheotomy there is still difficult respiration and often cyanosis.

Differential diagnosis must be made between this condition and laryngeal diphtheria, foreign body in the larynx or trachea, allergic involvement of the larynx and trachea, laryngismus stridulous and ordinary croup. It is very unusual to see a laryngeal diphtheria without a membrane on the fauces and posterior wall of the pharynx, Membranous inflammation is very seldom seen in laryngotracheobronchitis. We find that a mixed infection is the rule. Where any doubt exists, as is usually the case, diphtheria antitoxin should be given. The history and physical examination with x-rays will in most cases determine the existence of a foreign body. Proof of this is only by laryngoscopy or bronchoscopy. Allergic disorders very frequently are troublesome in differentiation. One can usually in an allergic case, however, detect an expiratory wheeze and chest examination reveals "musical rales." Relief with small doses of adrenalin would prove the condition to be allergy. Laryngismus stridulous is a spastic phenomenon usually subsiding in a few minutes and should be considered a precursor to laryngotracheobronchitis and treated with this in mind. The majority of cases of croup will subside in a very short time spontaneously, but any case may develop rapidly into the picture described above.

Diagnosis is made in a case with the symptomatology described above in which a negative culture of diphtheria is found. Blood work is not helpful and x-rays show nothing specific.

Mortality in this disease has been until the past two years, 100% in untreated cases and 70% in treated cases. Gittins reports the mortality in twelve of his cases seen from 1939 to 1942 to be 33.3%.

Treatment depends on the stage of the disease in which the patient is seen. Every case of croupy cough with fever should be given adequate fluid intake, chemotherapy and steam inhalations. If any marked stridor is present an oxygen tent is indicated with the humidity controlled by steam. Davidson recommends that a wet and dry bulb thermometer should be used in the oxygen tent and the humidity should be 95% and the temperature 70°F. The patient is watched carefully and if respiration becomes labored and more difficult, tracheotomy should be done. As in any laryngeal obstruction it is much better to do a tracheotomy before deep cyanosis develops and a rapidly performed operation is necessary. Even without cyanosis if it is seen that respiration is becoming more labored and the child is becoming exhausted, it is better to proceed with the operation. Many times a patient will be brought in with all the signs of acute laryngeal obstruction. In this event a mosher life-saver or bronchoscope will serve as an airway until tracheotomy can be done.

After tracheotomy the battle is still not won. Suction with a catheter through the tracheotomy tube is necessary to keep the airway clear. As stated, there is a tendency to the formation of crusts so that bronchoscopy aspiration and removal of these is necessary to relieve obstruction. Brighton recommends a fifteen solution of ephedrine in normal saline instilled into the tracheotomy tube at frequent intervals. Lately penicillin, 500 units per cc. has been used for this purpose.

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*Presented at the quarterly meeting of the Northeast Mississippi Thirteen Counties Medical Society, March 1945.

In discussing laryngotracheobronchitis, Troup and Weaver stressed the importance of the coöperation of all engaged in the treatment of these cases. The general care of the child is very important. In the case reported here, this was brought out forcefully to me. Were it not for the coöperation of Dr. J. L. Rubel in providing the proper feeding, sedation and general care of the baby the outcome would certainly have not been favorable.

REPORT OF CASE

Baby boy, M. D. H., Age 7 months—This child was admitted to the Doster Hospital on December 27 with all the signs of acute laryngeal obstruction. There was marked indrawing of the suprasternal notch and costal border. Cyanosis was marked. A tracheotomy was done soon after admission.

A history was obtained that the child had had a cold with some nasal discharge and fever for several days. The day before admission he began to have some wheezing and croupy cough. This gradually grew worse until he was brought into the hospital in the condition described above.

The baby had been healthy except for fairly frequent attacks of coryza until the present illness.

Examination showed a well developed, well nourished infant. There was some mucoid discharge from the nose and the mucosa was mildly inflamed. The tonsils and pharynx were inflamed but no membrane was seen. The ears were normal. Examination of the heart and lungs was negative. The temperature on admission was 104°F.

Ten thousand units of diphtheria antitoxin were given intramuscularly after smears and cultures were taken. The baby was placed in an oxygen tent with the humidity controlled by steam. Penicillin 10,000 units every three hours was started.

During the next twelve hours suction was used frequently, and instillations of penicillin into the tracheotomy tube was done every two hours. Moderate cyanosis persisted and became much worse the next morning. Bronchoscopic drainage was done through the tracheotomy wound and a large amount of thick mucus was aspirated. The tracheal mucosa was then moist but edematous. The cyanosis cleared after this procedure.

A Levine tube was inserted by Dr. Rubel, as the baby could not take nourishment well. Smears showed mainly staph and the culture showed only staph. Sulfadiazine was started by tube. The temperature came down to around 102° and the baby's general condition was good. The wbc was 14,000 with 60% polys.

The temperature remained between 101° and 102° and the baby did well until the following day when cyanosis returned in spite of a clear tracheotomy tube and upper trachea. Bronchoscopy was again done and it was noted that the mucosa was still edematous, but had become dry and numerous sticky crusts were evident, one large crust completely covering the left main bronchus. This was removed with forceps and saline instilled through the bronchoscope. The aspirator was used. The patient cleared markedly after this procedure, respiration becoming normal and cyanosis clearing.

This, however, did not last for long. In about four hours the baby became cyanotic again and respiration markedly labored. Bronschoscopic aspiration and suction was again done. During the following forty-eight hours this procedure was repeated every four hours. At the end of about three and a half hours the baby would begin to breathe rapidly, the rate often going to 100 per minute, and very deep cyanosis would develop. We thought with each attack the baby would certainly die. After repeated aspirations with the catheter and instillations of saline without success, bronchoscopic suction would be repeated. Finally after fourteen instrumentations with the bronchoscope, we were able to clear up the cyanosis with instillations of saline and aspiration with the catheter.

From this time on the baby gradually improved. After blockage of the tracheotomy tube for two days decannulation was done on the fifteenth postoperative day. He was allowed to go home on the nineteenth postoperative day.

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Don't Neglect Cancer*

CLARENCE C. LITTLE, M. D.
Managing Director
American Cancer Society

Never before have we been so aware of the life-saving power of scientific research. Out of the laboratories and on to the firing line where millions of our young men are risking their lives, have gone sulfa drugs, penicillin, dried blood plasma. From the past we can take the names of killers conquered by science—yellow fever, smallpox, diphtheria, typhoid.

Today research against cancer stands on the threshold of new and great advances. It has already given us ways of producing and of controlling the production of the disease in laboratory animals. It has begun to give us knowledge of how cancer cells differ from normal cells.

But cancer research needs financial support and more trained workers. It must be given the material aid and security to make it efficient and increasingly powerful.

Never before have we understood so well how to organize for the detection of precancerous conditions or to identify cancer in its early and curable stages.

Few as yet realize the nature of the emergency which cancer presents. There are 17,000,000 living Americans who will die of cancer unless something is done. There are at least 5,500,000 of them who can be saved from death from cancer by simple, direct means.

You who read this are one of the "means" by which these lives can be saved. Learn the danger signals that may mean cancer and the ways in which the risk of cancer may be decreased. Pass this information on to others. Enlist during April in the Field Army of the American Cancer Society. If one of the danger signals appears either in your own life or in that of a friend insist on prompt fearless action. Go to your doctor for examination and advice.

Education alone can save millions of lives even if research does not advance. No one can afford to be too busy to neglect this challenge. It is a choice between intelligent protection of yourself and those you love on the one hand, and ignorant risk of health, happiness and perhaps life itself, on the other.

The American Cancer Society has been for over thirty years the one great national organization devoted to study and development of plans for cancer control. It stands firmly on three fronts where it is face to face with the enemy—research, service, education. It is going forward in support of all of these fields. It is going to take with it millions of Americans, who realize the great need and their power to help.

The American Cancer Society has a division of its Field Army in Mississippi. Dr. Emma Gay of Biloxi is the state commander. Districts and counties have organized for an intensive educational and fund raising campaign in April which has been set aside by Congress as Cancer Control Month. Let us protect those we love—Help to Conquer Cancer. Send your check to O. G. Swetman, Peoples Bank, Biloxi, Mississippi.

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*Prepared at the request of Dr. Emma Gay, state commander of the American Cancer Society.

Public Health Will Protect the Peace*

FELIX J. UNDERWOOD
Executive Officer, Mississippi State Board
of Health

TODAY, in camps and hospitals, on battlefields and on life rafts in mid-ocean, the discoveries of medical research are saving the lives of our fighting men. Here at home millions of men and women are giving their blood, grateful that science has found ways to use it for saving life.

Never can we forget the debt we owe to the scientists and research workers whose painstaking toil has given life to thousands. The magic of blood plasma, sulfa drugs, penicillin and other "wonder-workers" fill us with thankfulness. We who have received the benefits of yesterday's research should be eager to provide further opportunities for tomorrow.

Second only to victory is the question of what we are going to do with peace and how we can best preserve it. This is your job and mine, not tomorrow but today and from now on. The kind of living we will do in Mississippi when peace comes is the direct responsibility of every individual in every community—and you supervisors have the added responsibility of guiding and directing many of the activities that determine the kind of living we do.

There can be no question but that public health will aid greatly in protecting the peace —and full peacetime living — *if it is extended to all people on an adequate scale.* If you think this is merely the viewpoint of an optimistic fellow engaged in health work, then you fail to realize the full meaning of public health and its prevention of disease and death, of poverty bred by illness and of conditions of environment that make for the deadly apathy which is fatal to community progress.

What is public health?

The first objective of public health is to keep well people well, so they can work and really live and be happy—not drag out their days bowed down under a burden of sickness that could have been prevented or cured. In the past we have not placed too much emphasis on the proper diagnosis and scientific treatment of disease but too little on seeking its causes and means of prevention and applying those means. Now we are beginning to realize that both lives and money can be saved by preventing many of these diseases. We have vaccination and immunizations for smallpox, typhoid, diphtheria, whooping cough and scarlet fever, and it behooves us to see that everybody uses these preventive measures to stamp out such scourges.

This can be done by education, vaccination and sanitation — by teaching people health habits and practices. It is worse than useless to impede progress by saying that teaching health habits is a long, uphill pull—people are eager to learn when they are interested and see a need. Could there be any greater need than that of strong bodies, strong minds and the wholesome attitude necessary for clear thinking and good citizenship? And whose responsibility is it to see that the folks in your community become sufficiently informed and interested in reaching maximum physical fitness to take advantage of services already available, and ask for more? Our joint responsibility.

If, in spite of our best efforts, our people become ill they need and deserve adequate medical and hospital care and provision for whatever treatments are necessary. We are all agreed on that. We are probably also agreed that we are as smart as the Russians—we like to believe that we have plenty of ingenuity and common sense and that we have higher living standards than any other country in the world.

But consider what those forward-looking Russians are doing: in 1941 the enrollment in medical schools in Russia was 120,000 and this figure has been maintained throughout subsequent war years. Under their plan *the poorest peasant will have better medical and hospital care than thousands of our people can possibly obtain at the present time.* With science holding the key to national safety more than ever, Russia is showing some smart policies in protecting her long-range assets.

England is looking well after her medical and welfare best interests.

Our medical students are being drafted.

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*Read at Mississippi Supervisors' Association Meeting, Heidelberg Hotel, Jackson, Mississippi, August 30, 1944.

Death alone takes a toll of 4,000 doctors each year — that this does not include the casualties in action which are unknown. We face the fact that the supply of doctors has been dangerously diminished and the situation is becoming alarmingly worse. What will happen in your community when "Old Doc" passes on? Don't delude yourself with the hope that some young doctor will be coming along to replace him. The young men who want to study medicine are in the army — and most of them won't come back to study medicine after the war, if they come back at all. With the volume of oncoming doctors slashed in such drastic fashion, the future of medicine and science appears to be left generally to girls and 4-F's.

Those who do come back and want to study medicine can go to the University for 2 years, then they must go out of the state to complete their training. They cannot even come back here to serve their hospital internship, since not a hospital in Mississippi is qualified to provide intern training. By the time they are ready to practice they have made connections elsewhere and stay there. Evidently we don't think enough of our health and welfare to protect it as other states do and countries do. (Tennessee has 3 medical schools, Louisiana has 2, Texas 3, Georgia 2, Arkansas and Alabama both have four-year medical schools). Our 2-year school at the University was put off the approved list a few years ago; I went with the Dean of the Medical school and the Chancellor to Chicago two or three times and we succeeded in getting the school restored to probational status and later the approved list. But two-year schools are doomed. Then our medical students will have to spend their entire training period outside the state, with less chance than ever of coming back.

Another need.

We need a large central hospital, one with provision for the practice of all branches and specialties of medicine. We need one with pediatric and obstetrical departments, a neurologist, a psychiatrist and other specialists to look after any ills that may befall us. We build ample courthouses and city halls where lawyers may plead their cases. But we provide few and inadequate hospitals where doctors can work to save lives and train other doctors and nurses to carry on.

Why pile up millions in the state treasury and let our people suffer for medical care?

With a well planned and sensibly conducted central hospital fully equipped, with the State Board of Health, and its laboratory, its division of preventable disease control, the Sanatorium with its diagnostic and treatment facilities, Whitfield with the finest physical equipment in the nation for nervous and mental disorders, we could have the best set-up and organization for internship and residencies in the country.

You may say that you don't see the need for all this specialization, that you just want a good general practitioner to look after you and your family. True enough. But your wife, your daughter or sister is going to have babies and you want your women-folk to have the best, the most improved and successful kind of treatment yet discovered. With good roads and automobiles and hospitals and trained physicians and surgeons, nurses, laboratory technicians, and other necessary trained personnel they can have it.

Then, our county health departments should come in for their share of reorganization. All county health departments should be adequately housed, with facilities for isolating communicable diseases. The medical and nursing school with a hospital, completely equipped, would serve as a "mother" to the county departments or clinics, lending aid and assistance and supplying the trained personnel necessary. Think what this would mean to any county confronted with an emergency or disaster — almost immediately, helping hands would be there. Our organization in the Health Department could in this way help bring medical care to all our people.

There are 17 counties in the state without full-time health departments. We should organize these counties for public health work, giving preference to 7 counties that have already made financial provision for it. This organization should take place in the order of their appropriations for health work.

Finally, with all counties organized, we should turn back and intensify the program in all areas. Adequate health service means an all-inclusive program — medical, hospital and sanitary. Broadly interpreted, real public health means making every possible provision for keeping well people well and for healing the sick. Your public health forces and the medical profession will work hand in hand in a common cause with a common objective: good health for all of our people.

The Mississippi Doctor

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The journal with a vision which encourages a plan of delivering modern medicine to the masses at less cost to the individual and more profit to the practitioner. It champions the community hospital, the hub around which this service must be built.

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Manuscripts and material for publication under the Mississippi State Medical Association should be received not later than the twentieth of the month preceding publication. Address material to Lawrence W. Long, M.D., Suite 412 Standard Life Building, Jackson, Mississippi.

The postgraduate course in obstetrics and pediatrics recently carried over the state by the Tulane University School of Medicine and the Mississippi State Board of Health was an extraordinary, successful undertaking. The courses were conducted by Dr. Ralph V. Platoux, Dr. George Mayer, and Dr. Virginia Howard. One man made the statement that he received more from this one-day course than he had sometimes in a four-week course in a large school. That the latest in research from the medical centers shall flow regularly to the practitioner, that the observations of the general practitioner and the actual conditions and the needs out on the rural medical firing lines shall be reflected back to the medical centers for study and evaluation is the right principle. The observations of the country practitioner should be valuable because he knows patients, their children and their children's children oftentimes over a half century. And the time must come when the patient in all his relations to his individual invironment must be studied as well as the disease he has.

Definite instructions in obstetrics and pediatrics is of greatest importance in our state, medically, socially and economically. We are coming more and more to the short courses offered the busy doctor. These courses cover the essentials in important medical and surgical conditions. This postgraduate course seems to have been the best yet.

We are very sorry we can not have the Half Century Club luncheon at the state meeting this year. Next year we feel sure the state meeting will be running in due form, and we now invite you each and every one to be our guests as you were last year.

The men who have practiced for fifty years have done a most noble work during this shortage of doctors in our state. They have been patriotic to the heart, brave, courageous, and efficient in their efforts to serve. We feel very proud of them.

§

If we lose Doctor Harter from our state sanatorium it will be with the deepest regret. He is able, worthy and well-qualified as a chest surgeon and has served our state in a big way.

We are very grateful to the doctors who are carrying courtesy cards with us. This helps us, and the coöperative spirit it manifests we appreciate.

We are grateful to the many doctors in the Mid-South who have recently renewed their subscriptions to the journal. We are glad to have you as readers and we thank you for your good will and for your faith in our efforts in the cause of better medicine.

§

The question of whether Mississippi is to have a four-year medical school or no school at all seems to be coming rapidly to the point of decision. After much thought and consideration we believe the four-year course is the part of wisdom. Of course as the wise and scholarly Dr. W. A. Evans suggests, just another medical school might not be an advantage, but a school used as a means to deliver medical service out to the people, utilizing our small hospitals and able practitioners, might be a great step forward. Our four-year school must be A-1. The faculty must be the very best to be found. The buildings need not have marble walls and brass fittings, but adequate for twenty-five to fifty years service, when they will probably be out of date. A central university hospital will be essential, but every hospital in the state could be utilized in the set-up in which a four-year medical school is to be used as an end to carry medical service to every nook and corner of the state. The small hospital can be the center for a consultation service, with both consultant and practitioner deriving mutual benefit. At one time the post office in the city or town seemed adequate, but now mail is carried to every home. At one time the college and the university thought they had fulfilled their responsibility when they had delivered a diploma to only the few who were fortunate enough to come within their walls, but now these institutions are carrying valuable service to the most rural sections. We did think that an oil lamp was good enough for any farmer and all that he could afford, but now electric current is on its way to every farm home in the state.

Surely medical service can not linger behind and confine its best service to the large centers while the finest leadership on the earth suffers for the lack of its benefits. If the interest of all the people could be aroused and the medical wisdom of our doctors utilized, Mississippi could well open up a new era in medical service. Hospitals as political footballs of course will have to go, selfish ambitions will have to be replaced by united effort and concentrated determination to guide the destiny of our undertaking.

§

April is Cancer Month. In its death toll cancer ranks second in the United States, 180,000 per year. The exact cause of cancer is not yet known. It seems to begin in an abnormal cell, a bandit or a gangster cell, one that is a problem whose multiplication runs wild. A bruise or chronic irritation seems to play an important part. Surgery, radium and x-ray are our means of treatment. A cancer cell is supposed to be five times as sensitive to radiation as the normal cell. Whether radiation kills the cells directly or starves them by cutting off their food supply is not definitely known. Any way, cancer has such a small beginning that the means we have at hand will cure at least one half the cancer cases if applied early. If we can save only one half, we would save a life every ten minutes, six every hour, 144 every day. The American Cancer Society is now making a systematic attack on the cancer problem. It is undertaking to raise five million dollars to help wage the campaign. Research to determine the cause of cancer is very important, but even more important is educating the masses to the importance of early diagnosis and early treatment. In this undertaking the medical profession has a grave responsibility. Every practittoner should give special attention to cancer. He should have a trained nurse in his office to help him inform his clientele on cancer and to aid him in making adequate examination on every patient who comes in his office. For every practitioner a trained nurse is an apt slogan. Information on cancer should go to the lay press, especially the weekly newspaper. *Hygeia* is doing a fine work along this line and its circulation should be multiplied over and over. As members of the greatest profession on earth, let us do our full duty on the cancer problem.

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To the Council and Officers,
Mississippi State Medical Association,
Gentlemen:

By order of the chairman of the Council, D. J. Williams, I am notifying you that there will be a meeting of the council on May 8, 1945, 8:30 a. m., in the Robert E. Lee Hotel, Jackson, Miss., for the purpose of complying with the laws of the state of Mississippi relative to the selection of nominees to be submitted to the governor from which list he shall select three (3) members of the State Board of Health, and for such other business transactions as come before the Council in regular meetings. Each Councilor shall bring his annual report.

All officers of the State Medical Association are hereby requested to meet with the Council in an advisory capacity.

Signed: W.H. FRIZELL,
Brookhaven, Miss.
Secretary, Council.

For the Chairman,
D. J. Williams,

CHEST PHYSICIANS CANCEL MEETING

The American College of Chest Physicians, with a membership in twenty-three countries, has cancelled its annual meeting scheduled to be held at Philadelphia, June, 1945.

The Executive Council of the College voted to hold a business meeting of the Board of Regents at Chicago, June 17.

OPHTHALMOLOGICAL SEMINAR

Emory University invites you to attend an ophthalmological seminar honoring the memory of Abner Wellborn Calhoun, M.D., LL.D., first professor of ophthalmology of Atlanta Medical College, April 19, 20, 21, 1945, Atlanta, Ga.

Lecturers include: Dr. William L. Benedict, Mayo Clinic, Rochester, Minn.; Dr. John H. Dunnington, College of Physicians and Surgeons, Columbia University, N. Y.; Dr. Harry S. Gradle, University of Illinois; Dr. Parker Heath, Wayne University, Detroit, Michigan; Dr. Walter I. Lillie, Temple University, Philadelphia, Pa.; Colonel Derrick Cail, University of Cincinnati, Cincinnati, Ohio; Dr. Frank B. Walsh, John Hopkins Medical School, Baltimore, Md.

DINNER HONORING DR. TOM D. SPIES

Dr. Tom D. Spies, Nutrition Clinic, Hillman Hospital, Birmingham, Alabama, was honored by a dinner given by his friends at the Waldorf-Astoria Hotel in New York on Monday evening, April 2.

Dr. Paul de Kruif, Holland, Michigan, presented Mr. C. F. Kettering, president, American Association for the Advancement of Science and vice-president in charge of research, General Motors Corporation, Dayton, Ohio, who made the address of the evening. Dr. Raymond Walters, president, University of Cincinnati, Cincinnati, gave a short address. It will be recalled that the Nutrition Clinic in Birmingham is sponsored by the University of Cincinnati College of Medicine. Approximately one hundred and fifty attended this dinner.

The following information about physicians in Mississippi we are sure is accurate. It is timely. The figures were compiled by the State Board of Health, February 22, 1945 According to population we have not more than twenty-five per cent as many doctors as we had fifty years ago.

Physicians in Mississippi by sex, by color:

	Total	**Male**	**Female**
White	1060	1643	17
Colored	52	50	2
TOTAL	1112	1093	19

Total number of physicians born in Mississippi—846.

Physicians licensed in Mississippi:

Examination	823
Reciprocity	217
Otherwise	72

The Licensed Physicians in Mississippi may be grouped as follows:

Active	915
Inactive	84
Partially Active	113
	1112

In Military Service	218
USPHS Physicians in state	10
County Health Officers in Military Service	25
Selective Service	2
Non-resident	5

Physicians in Mississippi come within the following age groups:

Under 25	0
26-30	17
31-35	45
36-40	77
41-45	70
46-50	68
51-55	81
56-60	160
61-65	206
66-70	190
71-75	110
76-80	58
81-85	15
86-90	12
Over 90	1
and age unknown	2

Physicians in Mississippi (by county):

County	**Total**	**County**	**Total**
Adams	16	Leflore	30
Alcorn	14	Lincoln	15
Amite	8	Lowndes	24
Attala	10	Madison	10
Benton	2	Marion	11
Bolivar	31	Marshall	8
Calhoun	11	Monroe	19
Carroll	7	Montgomery	7

Chickasaw	13	Neshoba	10
Choctaw	6	Newton	12
Claiborne	3	Noxubee	9
Clarke	10	Oktibbeha	9
Clay	13	Panola	9
Coahoma	24	Pearl River	9
Copiah	10	Perry	5
Covington	5	Pike	22
DeSoto	6	Pontotoc	11
Forrest	25	Prentiss	9
Franklin	2	Quitman	15
George	5	Rankin	14
Greene	3	Scott	5
Grenada	9	Sharkey	8
Hanconck	8	Simpson	15
Harrison	49	Smith	4
Hinds	107	Stone	4
Holmes	17	Sunflower	25
Humphreys	10	Tallahatchie	13
Issaquena	1	Tate	8
Itawamba	5	Tippah	8
Jackson	19	Tishomingo	6
Jasper	8	Tunica	9
Jefferson	4	Union	11
Jeff Davis	5	Walthall	4
Jones	26	Warren	34
Kemper	5	Washington	31
Lafayette	15	Wayne	4
Lamar	9	Webster	7
Lauderdale	50	Wilkinson	5
Lawrence	5	Winston	12
Leake	10	Yalobusha	11
Lee	30	Yazoo	14

Total 1112

Deaths

DR. M. A. COWDEN

Dr. M. A. Cowden, 65, died of a heart attack April 5 in Shannon. He was a life-long resident of that town. He received his medical education at Memphis Hospital Medical College, Memphis, Tenn., graduating in 1904.

Dr. Cowden is survived by his widow, a brother, Claude Cowden of Fulton, and a sister, Mrs. J. D. Green, Brooksville.

DR. T. W. KEMMERER

Dr. Theodore W. Kemmerer, 68, passed away at his home in Jackson on April 5 following a heart attack. A native of Davenport, Iowa, he had resided in Jackson for the past twenty-one years. He was a retired physician and served as director of the State Board of Health laboratories for fourteen years. He was a member of the St. Andrews Episcopal church.

His medical education was obtained at the University of Iowa and in Vienna, Austria.

Surviving besides his wife are one brother, Charles T. Kemmerer, Washington, D. C.; two sisters, Miss Sara D. Kemmerer, Washington, D. C., and Mrs. B. F. Gabbert, of Davenport, Iowa.

The remains were sent to Davenport, Ia., for final rites and interment.

DR. CHARLES H. WHEELER

Funeral services were held Sunday afternoon for Dr. Charles H. Wheeler, one of the community's outstanding colored citizens. The following article about the physician was written by C. W. Gilliam:

Dr. C. H. Wheeler, son of the late Charles and Vina Wheeler, pioneer people and successful farmers, was born on the farm about four miles north of Okolona. He served as a public school teacher and later graduated from the Meharry Medical College, Nashville, Tennessee and retired to serve as a practicing physician near Okolona for thirty--five years, giving liberally both of his time and effort to the community life.

DR. CHARLES HARTWELL COCKE

A former Mississippi physician who practiced at Crawford, Miss., for many years, died in Asheville, N. C., of a coronary thrombosis. He was born at Columbus, Miss. Graduating from Cornell University, Ithaca, N. Y., in 1905 he later was licensed to practice in Mississippi in 1908.

DR. H. J. FLOWERS

Dr. H. J. Flowers, 73, a lifelong resident of Kilmichael and a practicing physician there for 45 years, died March 25 at the home of his son, Dr. Harvey Flowers, in West Point.

The body was taken to Kilmichael, where services were conducted at the First Methodist Church by the Rev. S. B. Potts. Burial was at Kilmichael.

Dr. Flowers was graduated from Memphis Hospital Medical College, Memphis, Tenn., in 1897, and was licensed in Mississippi the same year.

He leaves his wife, the former Miss Kitty Fuller of Kilmichael; four sons, Dr. R. B. Flowers and Dr. Harvey Flowers of West Point, J. K. Flowers of Kilmichael and R. H. Flowers of Greenwood; two half brothers, George Flowers of Winona and Lloyd Flowers of Kilmichael, and a half sister, Miss Viola Flowers of Kilmichael.

He was president of the Bank of Kilmichael and a steward in the Kilmichael Methodist Church.

DR. JOE HOLMES PRICE

Dr. Joe Holmes Price, 46, practicing physician of Iuka, Miss., before he entered military service in 1942, was killed in an automobile accident near Baton Rouge, La., December 4, 1944. He graduated from the University of Oklahoma School of Medicine, Oklahoma City, in 1928. He was formerly on the staffs of various Veterans Administration facilities; at one time state district health superintendent at McLeansboro, Ill.; commissioned a first lieutenant in the Medical Reserve Corps of the U. S. Army on February 12, 1930, and began active duty as a captain in the Army of the United States on July 22, 1942.

DR. JOHN T. BARRY

Dr. John T. Barry, lifelong resident of Lafayette County, died at Oxford Hospital February 13, after several months' illness. For many years he was a resident of the Yocona community and practiced medicine in the eastern part of the county.

Dr. Barry is survived by two daughters, Miss Ruth Barry of Tupelo and Miss Gladys Barry of Birmingham, and a son, Autry Barry of Toccopola.

Interpreting Medical Literature

PEDIATRICS

Journal of Pediatrics, February—SYMPOSIUM ON PARENTERAL THERAPY, PARENTERAL ADMINISTRATION OF AMINO ACIDS, by Alexis F. Hartmann, M.D.

The following article by Dr. Hartmann is of such importance that I feel that it would be best to give almost the entire article as written by Dr. Hartmann. Since this is quite a new field of therapy and is far reaching in its effects, it will be necessary to quote Dr. Hartmann in practically the entire article.

The theoretical basis for the parenteral administration of amino acids rests upon the following considerations:

1. Protein molecules in living tissues are constantly being broken down and rebuilt by synthesis from amino acids.

2. Amino acids enter also into the formation of important nitrogenous substances, such as hormones, vitamins, enzymes, and other physiologically active compounds.

3. Only about one-half of the twenty-three known amino acids can be synthesized in normal metabolism.

Normal health and body functions are certainly incompatible with gross and prolonged amino acid depletion.

5. Less severe and even transient deficiencies are probably also deleterious and should be prevented whenever possible. In fact we believe that the parenteral administration of "amigen" is indicated in any condition in which it is difficult or impossible to provide full nutritional requirements in the natural way.

6. "Amigen" contains all the essential amino acids necessary both for positive nitrogen balance and growth when administered orally or parenterally.

In the practical administration parenterally of "amigen," the following points may be mentioned:

1. Properly prepared material may safely be injected intravenously, subcutaneously, and intraperitoneally.

Too rapid intravenous administration first produces a facial flush and a sensation of warmth, then a spreading flush over the body with nausea, vomiting, and sometimes fever. To avoid such reactions a slow intravenous drip is recommended; when the patient's face begins to flush then drip should be slowed. A rate below .01 Gm. per kilogram per minute is probably best.

3. Absorption from the peritoneal cavity is so rapid that symptoms characteristic of too rapid intravenous administration may result.

4. In infants the subcutaneous route is very much to be preferred, because it is technically much easier and the rate of absorption is always slow enough to avoid the reactions described and approximates absorption from the intestine after feeding. When given by this route, material adjusted to pH 6.5 should be used.

5. "Amigen" may be combined with glucose solutions, Ringer's solution, and lactate-Ringer's solutions for subcutaneous administration. The mixture used most extensively has been that comprising equal parts of 10 per cent "amigen," 10 per cent glucose and lactate-Ringer's solution.

6. With poor peripheral circulation as in severe dehydration or the presence of very low plasma protein, the subcutaneous administration of any hypertonic solution differing much from the electrolyte composition of normal body fluids is contraindicated. Such solutions tend to remain where injected and withdraw water and electrolytes from the blood and intercellular fluid. Frequently an initial intravenous injection overcomes such difficulties.

It is said that in attempt to meet requirements, it should not be difficult to give every eight hours, or three times in twenty-four hours, 250 cc. subcutaneously of a mixture of equal parts of 10 per cent "amigen," 10 per cent dextrose and lactate-Ringer's solution, followed each time by 100 cc. (20 cc. per kilogram) of 10 per cent dextrose intravenously.

It would be easy by subcutaneous, intramuscular, or intravenous injection to supply vitamins C and A and the B complex group. To provide "essential" fatty acids and as yet known factors in small but probably sufficient amounts, "enriched" plasma may occasionally be given intravenously in the customary dosage of approximately 20 cc. per kilogram body weight.

If a condition of excessive water loss prevailed because of vomiting, diarrhea, or fistula, larger quantities of fluid and, therefore, food could easily be administered, and total caloric requirements could possibly be met.

COMMENT

The subject of combining amino acids with the administration of fluid for the restoration of body fluid and at the same time furnish much needed nourishment is presented in a most interesting manner in the above article by Dr. Hartmann. It is considered best to present this most valuable paper almost in its original form. It will be noted that under a footnote by reference the author has this to say in regard to amigen, "In this discussion, it should be borne in mind that our remarks refer to but one preparation of amino acids—the enzymatic (pancreatic) digest of casein prepared under the direction of Dr. Warren M. Cox by Mead Johnson and Company, and furnished under the trade name of "Amigen" (accepted by the Council of Pharmacy and Chemistry of the American Medical Association). Almost all of our clinical experience has been with this preparation, and a review of the literature indicates that this preparation was also used in most of the experimental and clinical studies made elsewhere."

I may say that Dr. Hartmann has made a most exhaustive study of this product and the medical profession can rely on his experience with the use of this most valuable remedy with perfect confidence.

PUBLIC HEALTH

Anderson, Gaylord W.—*Global Epidemiology*. Journal-Lancet 65:47-49, February, 1945.

"No longer can a community or a nation think of public health solely in terms of its own problems," states Dr. Anderson. Much more than a local or a personal problem, disease today has attained a global status. Distances which once afforded a sense of isolation and protection from other areas of the world have practically vanished, and barriers have been further broken as a result of the vast social, economic and political changes of recent years. "We must, from selfish necessity, become our brother's keeper in matters of disease control," Dr. Anderson cautions. Undoubtedly, new problems warrant a change in epidemiological thinking. Introduction of rapid air transportation has had a profound effect upon the spread of disease from one country to another.

Brazil's costly experience following the introduction of *Anopheles gambiae* from Africa is cited. The presence of this malaria vector in Africa was of no more than academic interest until direct rapid transportation brought the species to Brazilian shores. The disastrous malaria epidemic that ensued will not soon be forgotten in Brazilian medical circles; although fortunately the disease was confined to but a small area of eastern Brazil. The ultimate and complete extermination of the gambiae mosquito from this area and the entire western hemisphere constitutes a significant and dramatic episode in the history of public health.

"One other example will suffice to indicate the importance of the global concept of epidemiology. A few years ago we believed that we could almost see the ultimate eradication of yellow fever. As we saw the foci in South America dwindling with each passing year we looked forward to the time when we could truly speak of an extinct disease. The discovery of jungle yellow fever and the recognition of its widespread occurrence throughout South America and Central Africa not only shattered our hopes but also pointed out a serious potential threat to other parts of the world. At the same time it raised the question as to the reason why yellow fever had not already spread to the Orient in spite of the widespread occurrence of suitable vectors in India and southeastern Asia. For lack of a better explanation we have fallen back on the hypothesis of distance and chance, though neither prevented the spread from Africa to America or vice versa. The fact is that we do not yet know why yellow fever has failed to spread from Africa to India and the Orient whereas dengue, which is spread by the identical mosquito and has comparable periods of communicability and incubation, has so spread.

"Influenza, on the other hand, has spread repeatedly, reaching pandemic proportions in 1918. No barrier thus far devised has had the slightest effect on limiting or slowing its spread. How it may have spread from one continent to another we do not know other than to suppose the very simple and in many respects hardly adequate concept of migration through persons ill with the disease.

"These examples suffice to illustrate some of the disease migrations that have and have not occurred and our lack of satisfactory explanation for these phenomena. The field of global epidemiology remains to be tilled, and it is to the best interests of all nations that there be the fullest understanding of the underlying causes of disease occurrence within a given locality in order that the most effective measures possible may be instituted to prevent its spread to new areas.

"At present, many are apprehensive that the termination of the war will witness further spread of disease and that troops returning to the United States will bring in new diseases which will become established on the continent. For reasons too numerous to discuss, I do not believe that the mere return of troops will open the doors to epidemic invasion. From the standpoint of self-interest the United States is probably less concerned with the global aspects of disease than many of the other nations. Our location, our climate, our sanitary culture and economic advantages give us certain barriers. However, as we recall the extensive outbreaks of typhus and malaria which followed the last World War, it is wise to think ahead and to apply the best epidemiological measures which can be devised to suppress any outbreak of disease at its source."

State Board of Health

Felix J. Underwood, M.D.

TO PREVENT MEASLES

Immune serum globulin (gamma globulin) for the prophylaxis, modification and treatment of measles is now available for the civilian population of Mississippi and other states. This is in keeping with the policy of the American Red Cross to return to the American people, as far as practicable, any useful blood derivatives accumulated in excess of military needs as a result of its blood donor program. The crude serum globulin fraction which is available is derived as a by-product of serum albumin, which has been declared surplus and assigned to the American Red Cross for distribution. The serum globulin is being supplied to the Mississippi State Board of Health and other state health departments and will be available without charge to physicians, hospitals and clinics, provided it is administered in accordance with established standards and without any charge to the patient for the globulin. Physicians will be able to obtain the globulin through the full-time county health departments, with complete instructions as to dosage and administration. In counties which have no organized health services, application may be made directly to the Division of Preventable Diseases Control, Mississippi State Board of Health, Jackson.

It is pointed out that when the gamma globulin is administered within the first five days after exposure to measles, the chances of preventing the disease are high; if not averted the disease may be modified. Use of the globulin confers a passive immunity which may persist for two or three weeks, but affords no lasting protection unless the patient manifests the modified form of the disease during the period of partial immunization.

Given even later than within the five-day period after exposure to measles, and prior to the clinical onset of the disease, the serum is likely to modify the severity of the attack, enabling the patient to acquire lasting immunity through having a mild attack. It is particularly helpful in:

1. Exposed children under five years of age.
2. Exposed children who are debilitated from recent disease or other cause.
3. Adults who, because of various disabilities, would be severely taxed by an attack of measles.

It should be emphasized to the patients that the serum does not give lasting immunity but only prevents from one exposure or modifies, thereby allowing patient to have a mild case resulting in permanent active immunity.

Measles is a serious disease, especially among infants and young children. This new measure of prevention may be the means of saving many lives and averting the complications so common to this condition. The mortality figures for the last five years in Mississippi reflect the need for better protection which it is hoped the immune serum will afford:

Age Group

Mortality from Measles—Mississippi

Age group	1939	1940	1941	1942	1943	5 year avg.
Total all ages	84	12	66	56	19	47
Under 1 year	20	2	20	16	9	13
1-4 years	27	6	16	18	3	14
5-9 years	9	1	9	4	0	5
10-14 years	5	1	3	7	1	3
15-24 years	6	0	6	3	2	3
25-34 years	4	1	1	2	1	2
35-44 years	2	0	1	1	0	1
45-54 years	2	0	1	1	1	1
55-64 years	1	0	2	2	1	1
65 and over	8	1	7	2	1	4

The new 1945 edition of the *Control of Communicable Diseases* (6th ed.) ,an official report of the American Public Health Association, contains the following section regarding measles:

MEASLES (Rubeola)

1. **Recognition of the disease.** Clinical characteristics are fever, catarrhal symptoms in the eyes, nose and throat in the prodromal stage, as well as at the height of the disease, an early eruption in the mouth, Koplik spots, later an exanthema and a branny desquamation during convalescence. When the disease is prevalent, or a susceptible child has been exposed be suspected on appearance of the fever and catarrhal symptoms, without waiting for confirmatory eruptions, and isolation precautions should be instituted at once.

2. **Etiologic agent.** A specific filterable virus.

3. **Source of infection.** Buccal and nasal secretions of an infected individual.

4. **Mode of transmission.** Directly from person to person; indirectly through articles freshly soiled with the buccal and nasal discharges of an infected individual. One of the most easily transmitted of the communicable diseases.

5. **Incubation period.** About ten days from date of exposure to onset of fever; thirteen to fifteen days to appearance of rash; uncommonly longer or shorter. When artificial immunization has been attempted, but too late to prevent infection, the incubation period may be as long as twenty-one days.

6. **Period of communicability.** During the period of catarrhal symptoms; the usual period about nine days; from four days before to five days after the appearance of the rash.

7. **Susceptibility and immunity.** All persons must be considered susceptible until they have had the disease, except that most babies born of mothers who have had the disease are immune for the first few months of life. Permanent acquired immunity is usual after recovery from attack.

8. **Prevalence.** Universal. Probably 80 to 90 per cent of all persons surviving to the twentieth year of life have had an attack, and rarely does a person go through life without having had measles. Occurs most commonly in children between five and fourteen years of age, but many cases are in children under five. Endemic in large population units.

9. **Methods of Control:**

A. the infected individual, contacts, and environment:

1. Recognition of the disease and reporting: Clinical symptoms. Special attention to rise of temperature, Koplik spots and catarrhal symptoms in exposed individuals.

2. Isolation. During period of communicability for the sake of the patient as well as others and particularly for the susceptible contacts of early ages.

3. Concurrent disinfection: All articles soiled with the secretions of the nose and throat.

4. Terminal disinfection: Thorough cleansing.

5. Quarantine: When the disease is very prevalent and in large communities, quarantine of exposed susceptible children is impracticable and of no value. Exclusion of exposed susceptible school children and teachers from school until 14 days from last exposure may be justifiable under sparsely settled rural conditions. This applies to exposure in the household. Exclusion of exposed susceptible children from all public gatherings under the same conditions for the same period. If the date of only exposure is reasonably certain, an exposed susceptible child of school age may be allowed to attend school for the first seven days of the incubation period. Quarantining of institutions of young children and of

wards or dormitories where exposure is suspected is of value. Strict segregation of infants if a case occurs in an institution is important.

6. Immunization: By the use of the serum of convalescent patients or of healthy adults who have had measles, or by the use of an immune globulin preparation given to a person within five days after his first exposure to a known case of measles, the attack in the exposed person may be averted in a considerable percentage of instances; if not averted, the disease may be modified. Such passive immunity may persist for a few weeks, but not more than four. Given later, but at a time prior to the clinical onset of the disease, convalescent serum usually modifies the severity of the attack and the patient probably acquires the usual lasting immunity to the disease.

7. Investigation of source of infection: Search for exposed susceptible children under three years of age is profitable. Carriers are not known to occur. Every effort should be made to have all cases reported early in the disease by the physician, or if there is none in attendance, by parent or guardian. The chief object of discovering cases is to give all possible protection to the very young or debilitated against infection, to administer passive immunization if practicable, and to secure adequate medical care for those infected.

B. General measures:

1. Daily examination of exposed children and of other possibly exposed persons. This examination should include record of the body temperature. A nonimmune exposed individual exhibiting a rise of temperature of 0.5°C. (0.9°F.) or more should be promptly isolated pending diagnosis.

2. Schools should not be closed or classes discontinued, but daily observation of the children by physician and nurse should be provided.

3. Education as to special danger of exposing young children to those exhibiting fever and acute catarrhal symptoms of any kind, particularly during years and seasons of epidemic prevalence of measles.

4. In institutional outbreaks, immunization with convalescent serum of all minor inmates who have not had measles is of value in checking the spread of infection and in reducing mortality. No new admissions and no visitors under 16 years of age should be permitted in an institution for children during a measles outbreak in a community or in the institution.

5. The immunization of infants and children under three years of age with convalescent serum or an immune globulin in families where cases of measles occur in older children or adults should be encouraged by the department of health and by private physicians.

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PREVALENCE OF COMMUNICABLE DISEASES IN MISSISSIPPI

	Feb. 1945	Feb. 1944	Feb.-5 yr. avg.
Acute poliomyelitis	2	2	2.8
Bacillary dysentery	633	476	434.6
Dengue	0	0	0.0
Diphtheria	37	16	24.8
Influenza	8728	12014	10966.4
Measles	485	2720	2116.8
Meningococcus meningitis	21	45	25.2
Other forms meningitis	3	23	8.0
Pellagra	156	133	179.2
Pneumonia	2247	2570	2377.4
Pulmonary tuberculosis	132	155	112.8
Scarlet fever	174	48	68.4
Smallpox	0	1	1.6
Tularemia	1	3	4.6
Typhoid fever	5	13	7.2
Typhus fever	12	2	3.4
Undulant fever	8	4	3.8
Whooping cough	546	1021	858.8

Woman's Auxiliary

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EXECUTIVE BOARD MEETING

Mrs. J. L. Clark, president of the state Auxiliary, is calling a meeting of the executive board in Jackson at the Robert E. Lee Hotel on May 8. All state officers, councilors, and local auxiliary presidents are urged to attend this meeting.

NORTHEAST MISSISSIPPI THIRTEEN COUNTIES AUXILIARY

The members of the Northeast Mississippi Thirteen Counties Auxiliary met March 13 in Columbus at the "Y" building for the quarterly meeting. Mrs. W. H. Cleveland of Tupelo presided in the absence of the president, Mrs. W. L. Orr, who tendered her resignation. During the business session Mrs. Thomas F. Wolford was unanimously chosen to succeed to the presidency of the group.

An informal tea and musicale was given by the doctors' wives of Columbus, presided over by Mrs. S. L. Hollingsworth and Mrs. John E. Davis. Mrs. Tom Bailey of Jackson was an honor guest. There were vocal and harp selections by Mrs. Andrew Puckett, vocal and piano numbers by students from M. S. C. W. Russian tea and open faced sandwiches were served as a delightful complement to the afternoon hospitality.

CENTRAL AUXILIARY

Plans for "Doctor's Day" were discussed by the Central Medical auxiliary when the group met last month in the Red Cross rooms on the fairgrounds to make dressings for use at Foster General Hospital. Mrs. W. R. Bethea presided. The annual entertainment by the auxiliary for the doctors was tentatively set for May 4.

Mrs. H. F. Magee opened the meeting with a word of prayer. This being the annual business meeting, each officer submitted her report. Mrs. Bethea was given a rising vote of thanks for her leadership of the auxiliary, and she in turn thanked the other officers and members for their coöperation.

Those present were: Mrs. Temple Moore, Mrs. L. C. Harrington of Terry, Mrs. C. C. Smith of Sanatorium, Mrs. James Blaine, Mrs. John M. Ware, Mrs. H. F. Magee, Mrs. Hardie Hays, Mrs. John Harter of Sanatorium, Mrs. H. C. Ricks, Mrs. George E. Riley, Mrs. H. C. Sheffield and daughter, Miss Mary Frances Sheffield, Mrs. W. R. Bethea, Mrs. J. W. Lipscomb, Mrs. Steve Coley, Mrs. Noel Womack and sister, Mrs. J. K. Vardaman, Jr., Mrs. George W. Owen, Mrs. I. C. Huggins, Mrs. N. C. House, Mrs. Lawrence Long, Mrs. Adna Wilde and Mrs. W. C. Thompson.

WINONA DISTRICT WOMAN'S AUXILIARY

The Woman's Auxiliary of the Winona District Medical Society met in Lexington Tuesday, April 10.

At noon a lovely luncheon was enjoyed at the hotel by the doctors and their wives jointly with the B. and P. W. club of Lexington. There was an interesting musical program by club members and a health talk by Dr. W. H. Weeks, of the Holmes County Health Department.

The auxiliary meeting was presided over in a most able manner by the president, Mrs. S. L. Bailey. Members and guests present included Mrs. J. K. Avent, Mrs. W. G. Brock, Mrs. H. K. Curry, Mrs. Edgar Giles, Mrs. S. A. Eggleston, Mrs. J. James, Mrs. J. H. Leigh, Mrs. Emmett Ray, Jr., Mrs. H. M. Terry, Mrs. W. H. Weeks and Mrs. P. B. Brumley.

This being the first meeting since the organization of the auxiliary, there was no regular program but the time was spent in outlining the duties of each officer and discussing the work and aims of the auxiliary. Subscriptions to **Hygeia** were stressed and one member reported having secured twelve subscriptions.

The president discussed the Murray-Wagner-Dingell bill for socialized medicine and the auxiliary went on record as being unanimously opposed to this bill and the secretary was instructed to write our congressman and senator of this action.

The next meeting will be in Kosciusko in July.

Happiness

Happiness in this world, when it comes, comes incidentally. Make it the object of pursuit, and it leads us on a wild-goose chase, and is never attained. Follow some other object and very possibly we may find that we have caught happiness without dreaming of it; but likely enough it is gone the moment we say to ourselves, "Here it is," like the chest of gold that treasure-seekers find.

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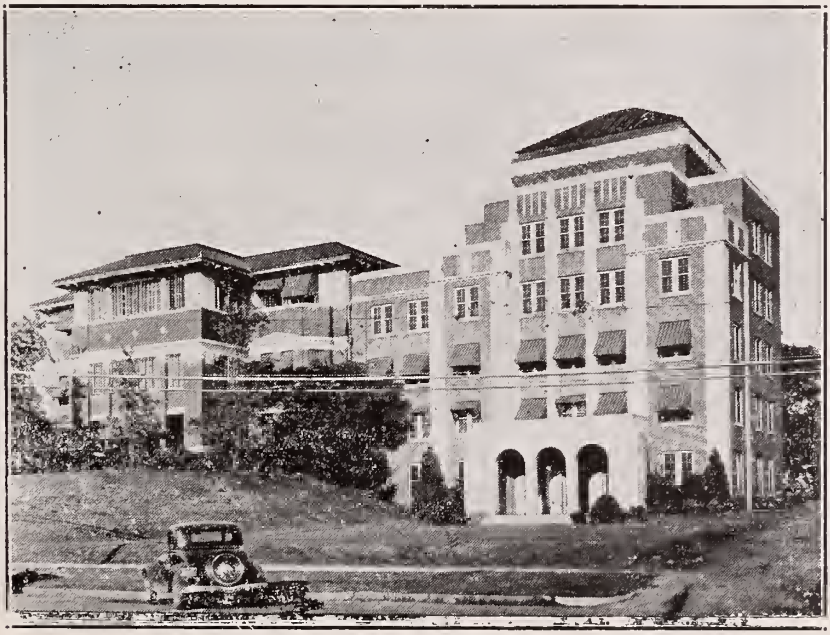

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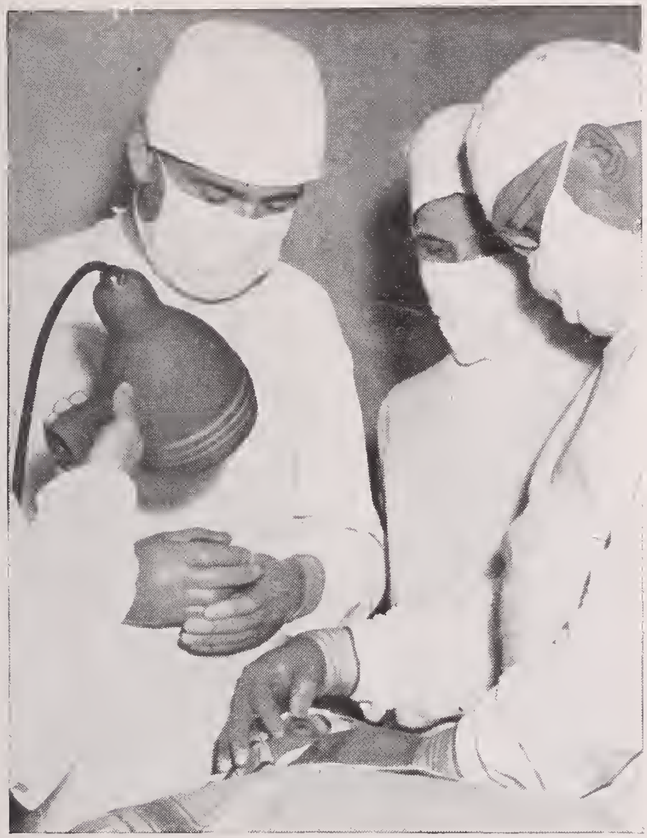

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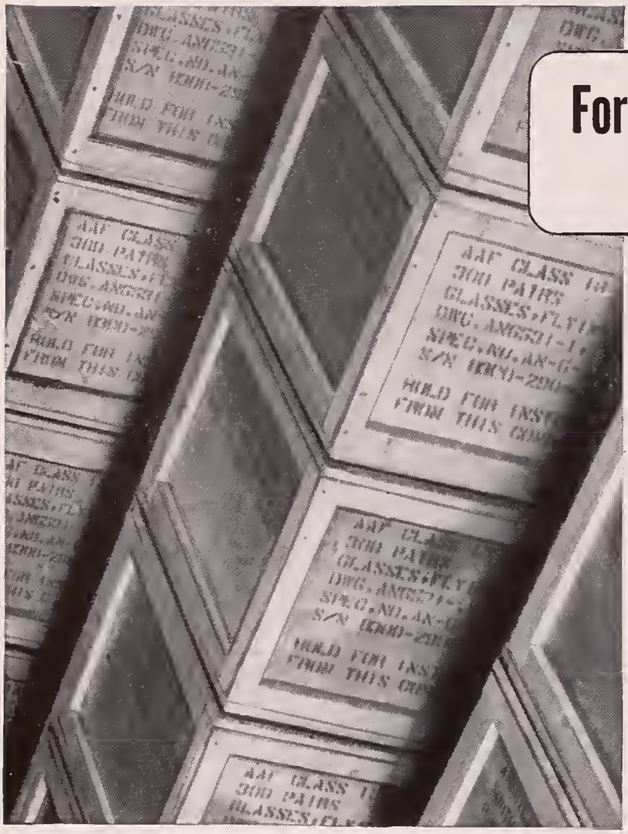
"UNTO HIS MEASURES MOVETH THE WHOLE"

Elizabeth Browning

The little cares that fretted me,
I lost them yesterday
Among the fields above the sea,
Among the winds at play;
Among the lowing of the herds,
The rustling of the trees,
Among the singing of the birds,
The humming of the bees.

The foolish fear of what may happen,
I cast them all away
Among the clover-scented grass,
Among the new-mown hay;
Among the husking of the corn
Where drowsy poppies nod,
Where ill thoughts die and good are born,
Out in the fields with God.



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The Mississippi Doctor

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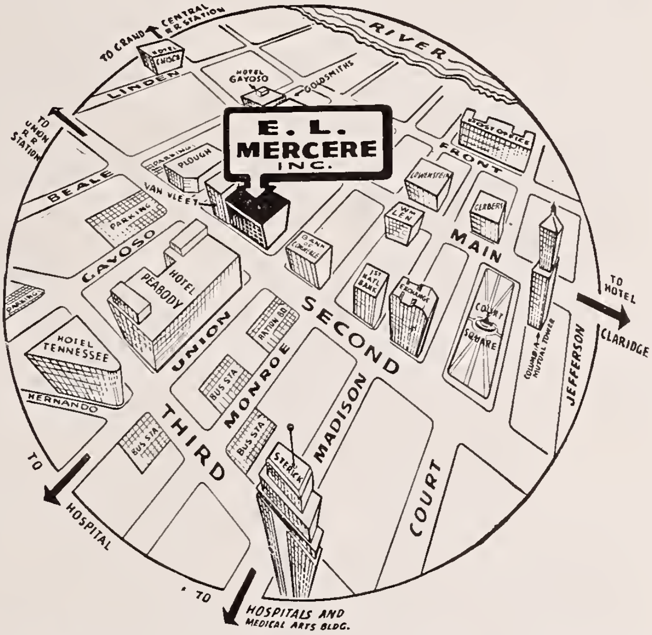
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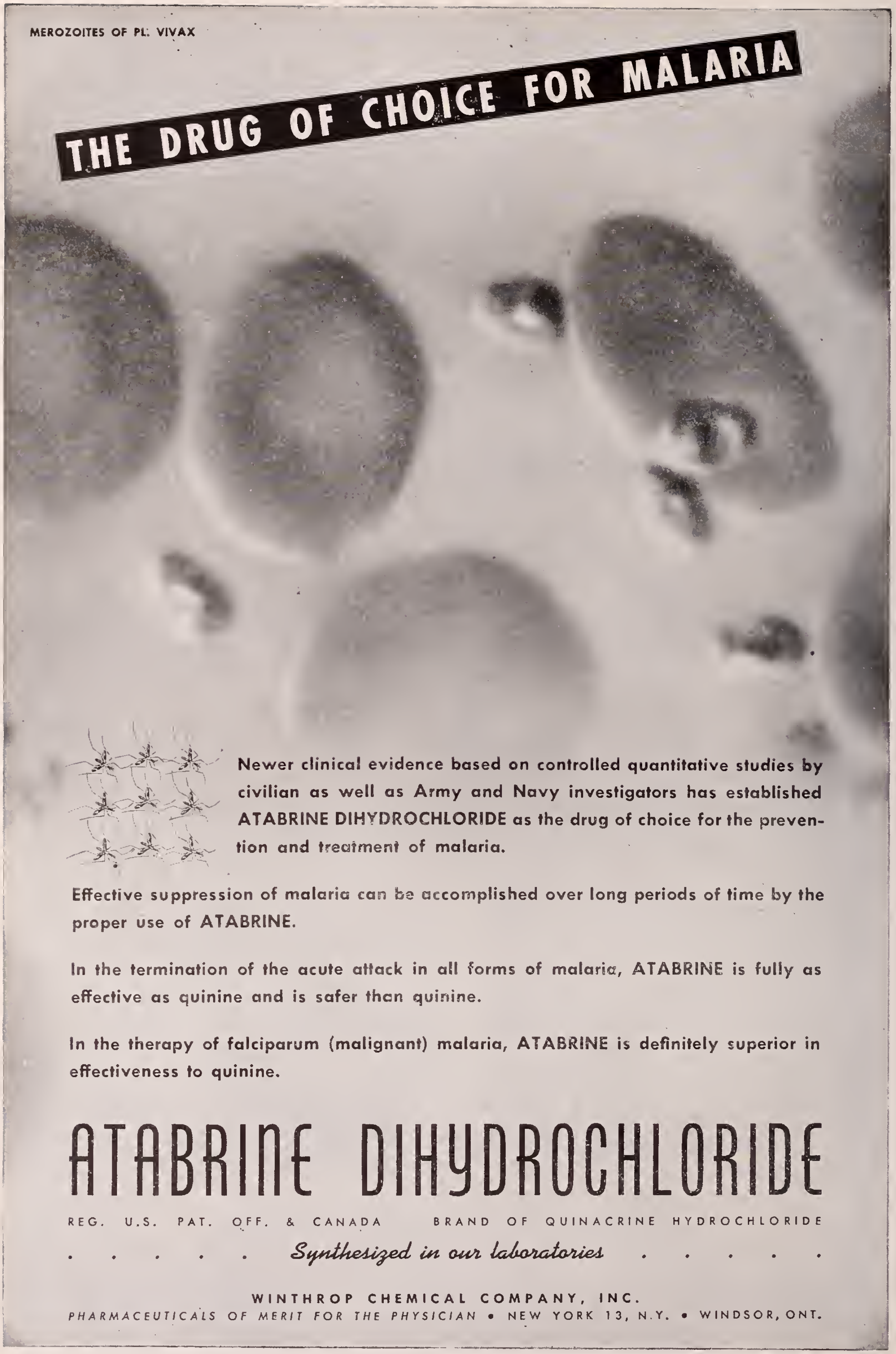

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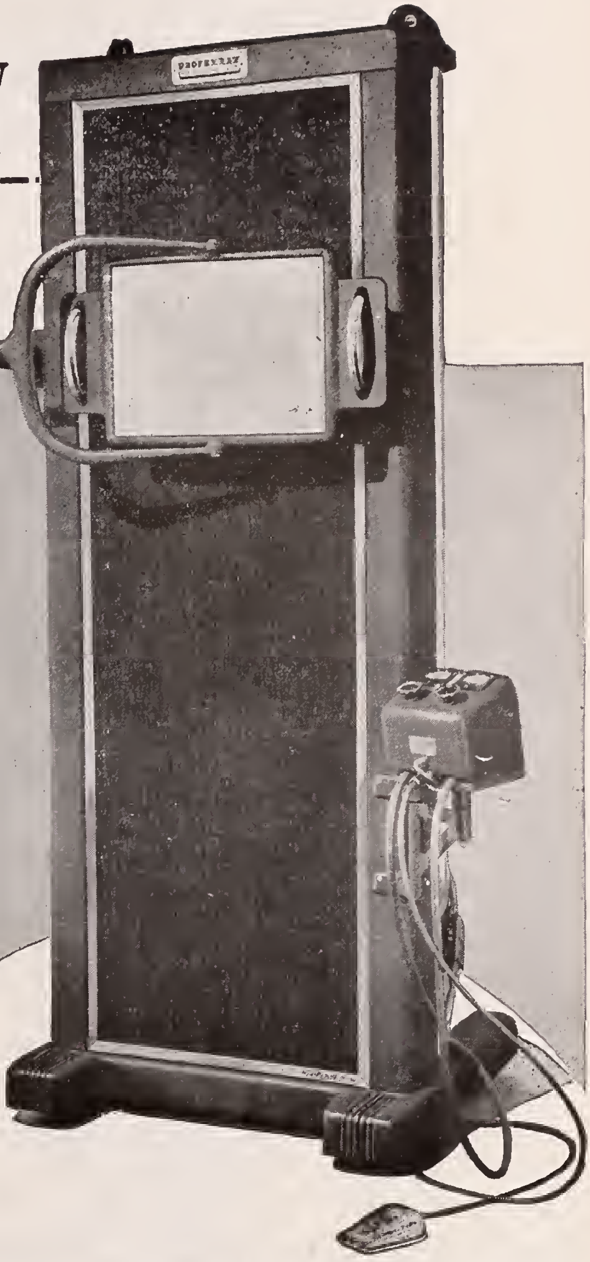

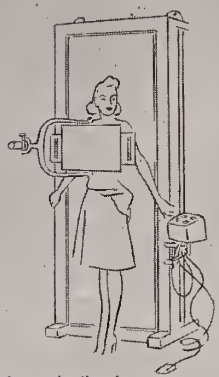

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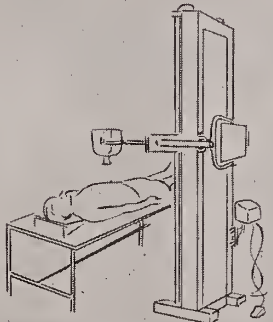

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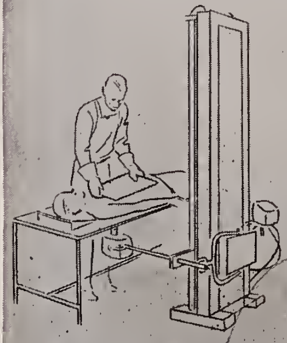

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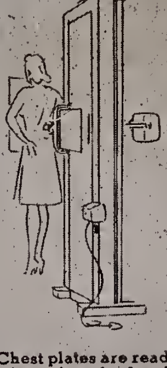

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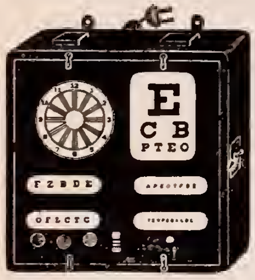

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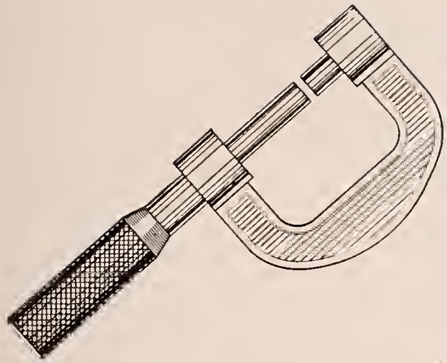

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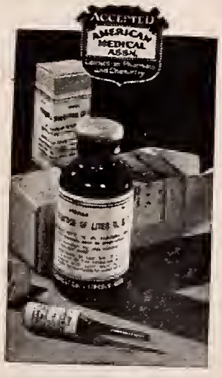

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Certain Public Health Problems in Parasitic Diseases in Mississippi in the Postwar Era*

ERNEST CARROL FAUST, M.D.

Department of Tropical Medicine, Tulane University of Louisiana
New Orleans, La.

INTRODUCTION

MISSISSIPPI HAS had a long and honorable history since the first settlement at Natchez in 1716. In the 1800 United States census, two years before Mississippi was admitted to the union as a territory and seventeen years before it assumed full rights as a state, there were only 8,850 persons residing within its borders. Three main lines of pioneers came to Mississippi to take up land, those who traveled through the Cumberland Gap, those who took the more southernly overland route from the Carolinas and Georgia, and those who came by water route to the coast and up the Mississippi River. The population first exceeded two million in 1930 and by 1940 had reached 2,183,796, an 8.7 per cent increase in the intervening decade.

Mississippi has always been, and still is, a state primarily of rural settlements. In 1940 less than 20 per cent of the total population lived in towns or cities of 2,500 population or over. Agriculture and, in more recent years, lumbering have constituted the principal occupations. The former pursuit in particular has engaged the large number of Negroes resident in the state.

The above observations are almost trite, but they have been made to focus attention on the fact that Mississippi's health problems are predominantly those of the rural areas and theoretically concern the white and black population in approximately equal numbers. Actually, however, they are much greater among the Negroes, as demonstrated year by year in the case and mortality rates for representative diseases.

The parasitic diseases which I wish to consider are those which are similar to all of us; namely, malaria, hookworm infection, filariasis, amebiasis and bacillary dysentery, plague, murine typhus, Rocky Mountain spotted fever, dengue and yellow fever. I shall discuss these briefly, principally as endemic problems but indicating which ones may also be introduced from without the borders of the state.

MALARIA

Malaria has been a disease problem in Mississippi since its earliest history. Some of the pioneers from the Carolinas and Georgia brought malaria with them, but the infection did not become hyperendemic until Negro slaves were imported on a large scale.[1] By 1850 the entire Delta area was overrun by the disease, while in the rest of the state it had developed in a relatively dangerous amount. Within the past quarter century increasingly coördinated efforts have gradually reduced the heavy malaria death rates. For example, the rate of 3.39 for 1943 was only about one tenth of that for 1933. The earliest attempts to control malaria by treatment with quinine were only moderately successful, due in part to poor diagnosis, in part to incomplete treatment, and in part to the low threshold of resistance of the poorer classes who constituted the bulk of the exposed individuals. During the past decade this enemy to normal existence has been attacked intensively on several fronts, including: 1) ever-increasing utilization of blood-film diagnosis to supplant or corroborate clinical diagnosis; 2) more adequate antimalarial treatment, particularly with atabrine which is now recognized as being highly effective against the malignant falciparum infection; 3) more general use of antimosquito sprays containing pyrethrum; 4) more nourishing food for our poorer classes; and 5), probably most important of all, extensive larvicidal and drainage projects under scientific management.

Yet Mississippi is by no means free of malaria. The statewide blood-film survey of 1943 picked up 25,094 cases of malaria, constituting about 1.12 per cent of the population, with infections diagnosed from every county in the state. In the Delta region it was almost twice as common in the Negro as in the white, in the bluff counties it was also considerably more prevalent in the Negro, but in the other regions of the state the reverse was true. Even though deaths have been greatly reduced, as long as malaria remains endemic in every county in Mississippi it can not be said by any means that the disease is under satisfactory control.

---

*Read before the Mississippi Public Health Association, Jackson, Mississippi, December 7, 1944.

Malaria acquired by our military and civilian forces overseas is now returning to our home communities. Fortunately, with relatively rare exceptions, malignant falciparum malaria has been eliminated in troops by suppressive atabrine treatment and only vivax malaria is being brought back in relapsing form. Many cases of this type are in our military hospitals and some are probably already mustered out of service. Frequently the men are on leave between their clinical attacks and mingle with our civilian population. There is mounting evidence that on the average two years will be required before these persons are malaria-free. Moreover, it has recently been demonstrated on an impressive scale that these exotic strains of vivax malaria are just as infective for our *Anopheles quadrimaculatus* as are our native strains.[2]

The program ahead is definitely indicated, namely, continued and increased efforts in accurate diagnosis and treatment; an adequate supply of nourishing food for the lower economic levels of our population, to build up their resistance; general use of effective repellents, as mixtures of dimethyl phthalate, indanole and Rutgers 612; pyrethrum or DDT sprays against adult mosquitoes, and intensified antilarval and larvicidal campaigns against the transmitting mosquito. It is conceivable, but not likely, that malaria can be eradicated from Mississippi even though *A. quadrimaculatus* is allowed to breed. With the elimination of this mosquito the chances of continued propagation of malaria are very scant. The liquidation of this mosquito should therefore be the ultimate goal, even though it may not be immediately feasible.

HOOKWORM INFECTION

The hookworm *Necator americanus* is an African parasite imported to the Western Hemisphere with the Negro. There is no way of measuring the economic loss and number of deaths due to infection with this intestinal roundworm prior to about 1910, but we know they must have been very considerable. The hookworm survey in Mississippi during 1910-1914[3] showed that most of the counties in the southeastern half of the state had a prevalent incidence of 50 per cent or more, but, by intensive treatment and installation of sanitary privies, in a period of twenty years this incidence was reduced at least one half and the average worm burden was even more satisfactorily lowered.[4] Yet in the surveys made by the Mississippi State Laboratory in 1938-1941[5] the incidence was found to be relatively high, in fact it seemed to have increased in Greene and Wayne counties. This is the same situation which exists today in Georgia,[6] where it has become difficult for public health workers to eradicate the infection by continuing the older lines of attack. In 1943, 4437 cases among whites and 538 among Negroes were reported to the Mississippi State Board of Health.

Another hookworm infection occurs along the Gulf Coast of Mississippi, namely, *creeping eruption*. This is due to *Ancylostoma braziliense*, which, in the southern United States, produces intestinal infection in dogs and cats but causes only a skin infection in man. Control consists in care not to allow direct skin contact with moist sandy soil polluted by dogs or cats.

Hookworm infection is being acquired by our troops in the South and Southwest Pacific. Some of these individuals will probably return to their homes without complete eradication of the worms, so that special precautions should be taken to prevent them seeding the soil with new strains of the parasite.

The overall program in hookworm control, therefore, consists in renewed efforts at diagnosis and treatment, and continued educational campaigns to guarantee sanitary disposal of human nightsoil. Raising the nutritional level of the poorer classes will likewise minimize the pathogenic effects of this parasite.

FILARIASIS

A hundred years ago Bancroft's filariasis was probably sporadically established in the southern part of Mississippi, but it has long since spontaneously disappeared as a result of the paucity of human carriers. Although this infection has been contracted by several thousand American troops in the Samoan area of the South Pacific, the present status two to two and a half years later indicates that very few of the infections are maturing and that the public health problem with this disease in home communities will be negligible.[7]

AMEBIASIS AND BACILLARY DYSENTERY

Amebiasis of one hundred years ago in the South meant "bloody flux." In 1875, with the discovery of the etiological agent, *Endamoeba histolytica,* the infection in the hemorrhagic form of the disease became known as amebic dysentery," but this designation served to conceal the fact that frank dysentery constitutes a relatively small percentage of the cases harboring the infection. Amebiasis of the cecal area is certainly more prevalent than amebic dysentery and asyndromic amebic infection is still more common.[8] The Mississippi State Laboratory survey published in 1942[5] included a diagnostic study of *Endamoeba histolytica* made from nearly 50,000 fecal specimens. The average incidence of amebiasis for the state on the basis of a single examination by the zinc sulphate centrifugal floatation technic was 4.4 per cent and the calculated actual incidence was 22 per cent. Hinds County and other counties with a large urban population had infections considerably below the state average, while Neshoba and Newton counties, with practically 100 per cent rural populations, were far above the average. When we remember that the transmission of amebiasis may occur from contaminated water or food, through flies as mechanical vectors or by direct person-to-person contact, we realize the extent of the public health task for control of this infection.

In 1943 more than ten times as many cases of bacillary dysentery as of amebiasis were diagnosed by the State Laboratory.[9] This suggests one of two possibilities: 1) bacillary dysentery is either much more common or 2) physicians are more familiar with the signs and symptoms of bacillary dysentery than of amebiasis . The latter is probably the case, but I venture the guess that four out of every five cases of the milder Sonne type of the infection are overlooked by the physician and are derived of the benefit of specific diagnosis and treatment. For the practicing physician sulfaguanidine and sulfasuxidine are proving valuable aids in the treatment of *Shigella* infections. For the health officer control of the disease means clean food handling, control of filth-fly breeding and sanitary sewage disposal. Moreover, detection and treatment of carriers will probably yield valuable health returns.

PLAGUE

Bubonic plague is a notifiable disease in Mississippi, but the State Board of Health at present has no need to include it in its County Health Officers' Morbidity or Mortality reports. Marine quarantine provides an effective safeguard from plague on ships but domestic rats are common throughout the state, particularly along the Gulf Coast and in the South Central section. The sylvatic plague of the Western States has within the past three years reached the Great Plains and is moving eastward. Before many years plague may be a definite public menace in Mississippi.[10]

MURINE TYPHUS

This disease was first recognized less than twenty years ago in the southern United States.[11] Today it is an increasing liability. It is enzoötic in rats and is transmitted to man by the rat flea. Mississippi was late in recognizing this infection, but rats have no respect for state boundaries. In 1943, thirty counties in the state reported 132 cases, 125 in whites and seven in Negroes. Fifty of this total were in the coastal counties. [9] These figures are probably an underestimate, since mild infection in the Negro is frequently difficult to detect. Control of murine typhus means unremitting war on rats.

ROCKY MOUNTAIN SPOTTED FEVER

Only two cases of this disease were reported for Mississippi in 1943, both of them from Wilkinson County.[9] This disease is transmitted by two ticks which are common in the state, the Eastern dog tick (**Dermacentor variabilis**) and the Lone Star tick (**Amblyomma americanum**). Should the infection become more prevalent, as it is along the Eastern Seaboard, immunization may be called for.

DENGUE AND YELLOW FEVER

These two virus infections are both transmitted by the Stegomyia mosquito, *Aedes aegypti,* which breeds in all types of domestic water-containers throughout the Southern States. Epidemics of dengue have not occurred in Mississippi during the past two decades but it is possibly quiescent within the state. In 1943, five cases were reported, four from Itawamba County and one from Union County.[9] It seems probable, however, that these were incorrect diagnoses, since the disease is almost impossible to diagnose except during epidemics.

Yellow fever has not occurred in the Mississippi area since 1905, when the last epidemic visited New Orleans.[1] The disease never wintered-over in Mississippi but required re-introduction from the American tropics each year. Today jungle yellow fever exists throughout extensive areas of South America and Africa, and it is not beyond the realm of possibilities that persons exposed to the infection in Brazil, Colombia or Venezuela may reach the Gulf ports of Mississippi during the three-to-six day incubation period, infect the prevalent Stegomyia mosquitoes and start an epidemic among the almost completely non-immune population.[10]

The only practical safeguard against dengue and yellow fever is control of *Aedes aegypti* below the maximum safety breeding level of five per cent of domiciles. This is easy to achieve except during the summer and early fall months. Thus far anti-*Aedes aegypti* campaigns in New Orleans and other key coastal cities have demonstrated the difficulty rather than the simplicity of this task.[10]

Conclusions and Summary

The postwar public health problems in parasitic infections in Mississippi are concerned primarily with the same diseases which have existed within the state for many decades, namely malaria, hookworm infection, amebiasis and bacillary dysentery. In addition, murine typhus is becoming a serious public health problem, bubonic plague is possibly imminent, Rocky Mountain spotted fever may become increasingly important, and dengue and yellow fever are potential hazards. The control of these diseases is well known but deserves re-statement. For malaria, this requires better diagnosis and more adequate treatment and, above all, elimination by all known methods of the mosquito transmitter, *Anopheles quadrimaculatus*. For hookworm infection, amebiasis and bacillary dysentery, it will need more adequate diagnosis and treatment and continued improvement in the sanitary disposal of human wastes. For murine typhus and the potential danger of plague, it demands extinction of domestic rats. For safety against dengue and yellow fever, it requires a reduction of the *Aedes aegypti* index below the maximum safety breeding level.

If the above program is undertaken with intelligence and renewed determination, not only will there be health dividends in proportion to the effort, but the potential dangers of the importation of exotic infections in returning troops may be practically ignored, with the knowledge that the safeguards for endemic diseases will constitute barriers against which the more common exotic diseases will have no appreciable effect.

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To us odd names and peculiar animals is intriguing. A Selective Service board of New York City has a registrant named, Lieieusszuiusszeezes W. Hurrizzssteizii. We wonder what that W. stands for? The clericals of the Service would have him classed 4-F, forthwith.

Extrauterine Pregnancy*

REPORT OF A CASE

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EXTRAUTERINE pregnancy, or the little broader term, ectopic pregnancy, has gradually gained prominence in the field of gynecology and obstetrics since Tait first operated on a ruptured tube in 1883. Parry, before 1876, was able to collect only five hundred cases in the entire medical literature; in other words, before our state medical association was organized, only five hundred cases had been recorded. No doubt multiplied cases were never diagnosed. Before the era of appendicitis people had and died of cramp colic, but we do not know the common diagnosis for the tragedies of ectopic pregnancy in the earlier days.

It is estimated that extrauterine pregnancy occurs once in every three hundred pregnancies. One investigator in 1922 found the condition to constitute 1.3 per cent of the gynecological laparotomies in the Johns Hopkins Hospital prior to this time. Some writers have noted as high as one case in seventy ectopic pregnancies in their practice of full-term deliveries, abortions, and miscarriages. Extrauterine pregnancy seems to be a bit more common in the third decade of life.

The general practitioner would do well to be on the alert for a visitation that may come so insidiously as to be undetected or so swiftly as to take both patient and doctor off guard. The gynecologist, the obstetrician, the surgeon, in fact, every doctor should have a keen and watchful interest in pregnancies out of regular order. The great sin of our profession is omission rather than commission. It is not what we do not know, but what we do not do that counts against us, and again eternal vigilance is the special price of success in handling the ectopic pregnancy case.

The cause, the diagnosis, and the treatment are the essentials in handling any disease. The etiology of ectopic pregnancy is neither unerring nor easy. It is quite clear to our mind that infection, tubal, pelvic, et cetera, heads the list of offenders. The human spermatozoon is very active and persistent. It makes its way through the cervix and up into the tube to meet the ovum where fertilization takes place. Like all pregnant organisms, the fertilized human egg slows down and becomes a bit clumsy. As it travels down the tube, it may encounter the work of a designing trouble maker. Somewhere along the tube there exists a screening process which permits the spermatozoon to force himself through but screens the fertilized egg on her way down to her natural home in the lining of the upper half of the uterus. Infection seems to be the most successful designer of the screening process for the tragic pitfall, for the time bomb. Diverticula of the tubes, pelvic adhesions, tumors, uterine suspension, and possibly an inherent tendency on the part of the patient herself are contributory causes also. Pregnancy may occur in the interstitial part of the tube, the isthmic, or even the fimbriated extremity. It seems that the impatient spermatozoon does not always wait for the tardy ovum, but pushes on to the ovary itself and impregnates the egg, resulting in ovarian pregnancy.

"Wandering pregnancy" is a term applied when the pregnancy seems to have no connection with the tube, uterus, or ovary. This abdominal pregnancy as a rule will be found connected with the ruptured tubal pregnancy. The placenta may attach to any abdominal organ, even the liver. It is thought that about one per cent of ectopic gestations reach full term. A pregnancy in the interstitial portion of the tube usually does not rupture as soon as one in the main portion of the tube beyond the uterus. The uterine wall acts as a support. The tube beyond the body of the uterus usually aborts or ruptures within four to twelve weeks after conception. Tubal abortion is the most common way out. The ovary seems to be more adaptable to the pregnancy than the tube, but the majority of the ruptures in the ovary occur early. Pregnancy may take place in both ovary and tube at the same time, or in tube and uterus at the same time. One tubal pregnancy seems to predispose more or less to another. Even when we are wide awake to the possibility of ectopic gestation, the diagnosis may not be easy.

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*Given before the quarterly meeting of the Northeast Mississippi Thirteen Counties Medical Society, June 12, Corinth, Miss.

A very careful history is most important in the diagnosis. Any departure from the individual type of menses must be carefully noted. Going overtime, accompanied by some discomfort in the pelvis, plus irregular flow, is common occurrence. A history of pelvic infection should put the physician on guard, especially if the patient has given birth to one child. The history of the intrauterine pessary should stimulate further suspicion, also morning sickness, tenderness in the breast, and previous abortions. The history or presence of fibroids build up the evidence of tubal pregnancy. Endometrial biopsy and Friedman's test may be of distinct value in the unruptured ectopic. The diagnosis of extrauterine pregnancy before rupture is difficult at best and is not made in a very large percentage of cases. In the thin person with uterus up or anterior, the soft mass possibly may be felt in the tube. The tubal pregnancy seems to occur a little more often on the right side, which may add to the difficulty of positive diagnosis in a few cases.

In tubal abortion, which is very common, the blood may reach the abdominal cavity slowly; the pain may be mild and the tenderness moderate but distinctly on one side. Too often the rupture of ectopic comes as suddenly as the explosion of a bomb and the symptoms are dramatic; sharp pain, fainting, irritability of the bladder and rectum, rapid compressible pulse, pallor, and shock. Death may follow immediately. Jaundice will develop in a few days from absorption of blood if it remains in the abdominal cavity. The abdomen will be distended and have a more or less woody feel, palpation revealing tenderness across the lower abdomen. If the hemorrhage is limited, it will be decidedly more palpable on one side or the other. Air hunger and a certain anxious expression on the face may be observed in many cases. There may be a marked drop in blood pressure, in the total red cell count, in the hemoglobin percentage, but there will be an increase in the white cell count, which may always be expected to be above ten thousand. Manual examination is of extreme value, for the marked tenderness on one side. If clots are present, the mushy feeling and fullness may be observed, even liquid blood determined by the ungloved finger that has been well trained and possesses a very sensitive touch. With the patient in the Fowler's position, a needle into the posterior cul-de-sac may make the diagnosis positive by revealing free blood. We believe that in the average case diagnosis can and should be made without this examination. Rapid summing up of the history, the physical and laboratory findings, are of prime importance, that treatment may be instituted at once.

The treatment for ectopic gestation is surgery, but reason and surgical judgment are prerequisite. An unruptured tube is a D-Day bomb and should be operated without unnecessary delay. A ruptured tube with a clot formation is not so urgent, but we know that blood offers the best culture for bacterial growth and that the pelvis with a ruptured tube has a pretty fair chance to have infection in it. Furthermore, another hemorrhage may occur any minute. An increase in the total white blood count indicates this exigency.

The patient may need supportive treatment before or during operation. If the circulation is not too weak the patient will do much better with the head of the bed slightly elevated. The female pelvis tolerates blood or pus much better than the upper abdomen. Saline or glucose under the skin or by vein may help in some cases. If there is evidence of bleeding at the time the patient is seen, oprative interference at once followed by autotransfusion may be life saving. Shock, sweating, and fainting are good indications of continued bleeding.

Morphine preoperative is valuable for its soothing effect on the patient, as a heart stimulant, and in checking hemorrhage. Vitamin K is in order also. A transfusion before operation may be very valuable in some cases if time will permit. The type of anesthetic is worthy of consideration. We prefer novocain locally supplemented with a small amount of ether, enough to render the patient unconscious just as the abdomen is opened. The surgeon should hold in mind the definite aim of the operation—to stop the hemorrhage. A few broadly experienced surgeons in given chronic cases can play around in the human abdomen with impunity for an hour or so and get by with a low mortality rate, but this plan of procedure, generally speaking, is very hazardous to the majority. There is still a close relation between the duration of the operation and the mortality. In case of abdominal pregnancy of several months or near term, the fetus may have to be removed, the hemorrhage stopped, but the placenta left if the removal entails too much time and the loss of blood becomes too great. It is well to keep in mind that the placenta may absorb or can be removed later.

The stage should be set and every actor prepared to play his part as the clock ticks off the seconds in every operation, but time and alertness are doubly important in the average ruptured ectopic pregnancy. Most surgeons remove the blood that has accumulated in the abdomen, as much as three and a half quarts have been reported in the literature. In some instances this blood can be put back into the vein with miraculous results, but stopping the blood securely by removing the tube or ovary or both and getting it out is of major importance. There is no time to waste trifling with an appendix that is not sick or a simple fibroid. The utilization of the patient's own blood for transfusion is worthy of consideration. If the blood is fresh, if the surgeon is sure that the pelvis is clean, if other blood is not immediately available and the patient is in urgent need of blood, then, we would say, use it freely and at once. Unfavorable results have been reported in some instances of autotransfusion. We like to clear the abdomen of blood so that bacteria will not have it as a food. We clean the abdomen with normal warm saline, and then close it, moderately distending with oxygen.

The oxygen tent is valuable after the patient is returned to her room if air hunger is still evident. Enough morphine to keep the patient perfectly quiet is valuable. Blood transfusion and saline and glucose in proper amounts are most helpful and even lifesaving in many instances. If blood has remained in the abdomen for several days, infection is a postoperative problem. Again, the sulfa drugs come to our rescue. Sodium sulfathiazole by rectum may be used until the patient can take some form by mouth.

CASE REPORT

We have operated on a number of cases of tubal pregnancy during our practice but not one, as we recall, before the rupture. We operated one case which was pregnant in the tube and the ovary at the same time. As far as we know, we have not seen a case of extrauterine pregnancy and pregnancy in the uterus at the same time, which we recognized as such. We operated on two cases in which was found only a hard, well-organized clot about the size of a guinea egg in the middle of the tube. Our first case was a colored woman during our first month of practice. This case was drained through the posterior cul-de-sac. There was a large mass of blood and the clots were well organized. This patient finally died of sepsis. A case a few months ago was somewhat unusual:

Mrs. E. L. H., white female, 37 years of age, housewife. The chief complaint was sudden pain in lower abdomen followed with fainty spells.

Past History: Usual diseases of childhood, no serious sickness, snake bitten at five years of age. Married seventeen years, five children, four living and well, oldest fifteen years, youngest three. A son died at four years of diphtheria. She went to the hospital for her last delivery, had some fever, tenderness in pelvis and had to remain in hospital a few days longer than she expected.

Family History: Father and mother sixty-five and sixty-three, respectively, living and well; two brothers and one sister living and well; no brothers or sisters dead; no T. B. in family.

Present Illness: Last period, due September 9, began September 11; time, four days. No further show, no feeling of pregnancy, no pains in pelvis. On the morning of October 2 about nine o'clock while making her bed, the patient had a sudden pain in lower abdomen, felt fainty and had to sit down. Dr. A. E. B. was called, gave her a hypodermic for the pain about eleven o'clock. She became nauseated and vomited in a little while; pain was not relieved altogether. Fainted several times during the afternoon, pains extending up to chest, higher on left side.

Patient reported to us about nine o'clock without a definite diagnosis. The patient was well nourished, but pale, and seemed to want more air, was perspiring somewhat, temperature 97.6°, pulse rate 110, respiration 30, blood pressure systolic 90, diastolic 65, tender across entire abdomen, and very tender on bimanual examination, apparently more tender on left side.

Diagnosis: Ruptured tubal pregnancy, probably on left.

Operation 10:58 to 11:40 p. m., forty-two minutes. Infilterated with metycaine, gave ether enough to render patient unconscious. On making incision blood gushed up out of the abdomen, appeared to be about two quarts, some small clots in blood, but no large organized ones. The site of rupture was located and found to be in right tube about the middle. Hemostats were applied to prevent further bleeding. Seeing the amount of blood the patient had lost and having no technician to group the blood that night, a quick decision was made to use some of patient's blood for transfusion. Regular transfusion bottle was used. Small clots or bits of omentum delayed the progress, whereupon we used a large pack to press down and filter the blood so as to give free passage through the needle and to hasten the process. In the meantime, much of the blood had been wasted. We secured about three hundred cc. Warm saline was poured into the abdomen and quickly evacuated by machine. Right tube was not excised and bleeders securely tied. Abdomen was closed without drainage and patient given the three hundred cc. of her own blood as soon as she was returned to bed. Her pulse was improved at once. The patient did well and left the hospital in ten days and is still doing well as far as we know.

One half of our population during their reproductive life and in their most productive period may be subject to the submarine menace of ectopic pregnancy. The entire medical profession is duty bound to educate them in what preventive measures we know and put them on the alert for the bomb explosion on D-Day and we, ourselves, each and every one, should ever be on the alert to detect, intercept, and defeat this too often dramatic captain of death for the young and middle age female flower of our population.

DISCUSSION

DR. J. D. DYER (Houston)—Dr. Anderson has covered this subject well and there is little that I can add. I would like to say that tubal pregnancy is a condition that is much more common than we generally give it credit for being. It is a condition which we should make every effort to make an early diagnosis in, as this often means the difference in life and death.

Dr. Anderson has given all the usual signs and symptoms by which a diagnosis is made. However, there are two conditions which I think should be stressed in arriving at a diagnosis. One is a history of the patient having fainted and the other is the finding of leukocytosis. Naturally, these findings will be found only after bleeding begins. I have been very much surprised at the high incidence of fainting in the cases that I have had occasion to see. The last case that I saw walked into the hospital feeling well except for a little colicky pain in the right lower abdomen. However, she had fainted about three days previously and her white cell count on entering the hospital was 14,000. These findings combined with a history of a missed menstrual period enabled us to arrive at the right diagnosis. Posterior colpotomy to determine the presence of blood in the cul-de-sac is a great aid to diagnosis and should be done more often.

As for treatment of ruptured tubal pregnancy too much emphasis can not be placed on blood transfusions. Practically all hospitals now have blood plasma in the form of powder or in the blood bank. It is a very simple matter to administer plasma at once. However, I do believe that all these cases should be typed for transfusions and given whole blood in addition to plasma, if there has been much blood loss. The average case can be held up before operation until blood can be matched and transfusion executed.

Dr. Anderson mentioned reports in the literature on multiple tubal pregnancies. Just as an oddity, I would like to tell about one such case which I had occasion to have. We were able to palpate a mass just above the uterus and also were able to palpate an enlarged uterus. Because the patient had had a great deal of pain for several months we decided it would be best to do an exploratory. We did this and found an old ruptured tubal pregnancy with a calcified fetus free in the abdominal cavity which appeared to be about the size of a four-month fetus. The uterus was also pregnant, and was about the size of a three-month pregnancy. This patient did not abort but went ahead and delivered this uterine pregnancy at full term.

I thoroughly enjoyed Dr. Anderson's paper and the masterly way in which he has presented it.

DR. R. B. CALDWELL (Baldwyn)—The cases I see of tubal pregnancy are all in trouble in trouble when I see them. It always means emergency. I had some cases where I made the diagnosis before the tube ruptured. So far as treatment it is all surgery, and immediate surgery. Syphoning out the blood and measuring it gives you a good idea of how much blood is needed for the transfusion. I would be afraid to give blood back when plasma is so easy to get. You will get more shock from the amount of blood lost with these conditions than with any other abdominal blood loss.

Doctor Anderson has covered the subject well, and I have enjoyed it very much.

STANLEY A. HILL (Corinth)—This subject interests me because I belong to a less fortunate group of doctors who have had the painful experience of losing a case of ectopic pregnancy. After receiving a very good course in diagnosis, I thought I was extra special and started internship. A patient came in with the tentative diagnosis of perforated appendix, pulse 110, and pain in the right lower quadrant. The only other finding was some menstrual flow. The patient did not count her condition very grave. After two days of improvement under expectant treatment, her desire to go home was granted. Two days later, a fellow intern came into the dining room and asked what I knew about this patient. He had just made an ambulance call to her home where she died of acute dilatation of the stomach. I accepted his diagnosis. Our minds were at ease until the pathologist came along, did an autopsy and found tubal pregnancy. I was called to the clinical pathological conference for explanation. Even though my defense showed that the error was excusable, I made a resolution that this mistake should not be made again.

I think it is good for teaching purposes to consider three stages of tubal pregnancy:

First Stage: That without rupture, difficult to diagnose, should be sustained by Aschheim-Zondek test.

Second Stage: This is the acute stage; the tube ruptures and all the classical signs and symptoms of internal hemorrhage are present. It is the best known type, very dramatic, and demands prompt operation or else death follows.

Third Stage: This is the so-called chronic stage; for a long while I did not realize it existed. An organized clot forms and the patient goes through a long period of illness before diagnosis is made.

This stage of tubal pregnancy was illustrated to me in a case in which the rupture occurred eleven weeks before laparotomy revealed tubal pregnancy. This is a little unusual and is mentioned for the sake of completeness. This patient was first considered to have a uterine abortion, but after curettage and packing this diagnosis seemed to be an error. Then a mass was made out in the left side of the pelvis.

The use of whole blood is most important and is preferred to plasma in these cases.

W. H. SUTHERLAND (Booneville)—While Dr. Anderson was going over these cases, one of over twenty years ago was called to mind. This one was diagnosed early and the tube removed before it ruptured.

Another case of tubal pregnancy which occurred over twenty years ago, was ruptured, was in the home and was seen by me thirty miles in the country. This patient had been sick for several days and was in extreme pain on account of the tension of the abdomen. She was unable to be moved to the hospital. In her case the cul-de-sac was opened and a large amount of blood poured out into a washtub, giving her instant relief. A drainage tube was left in the cul-de-sac and in two or three days this patient was brought to the hospital, but she was getting along so well she was let alone and she made an uneventful recovery. I understand this patient is still living and in good health. She had no blood transfusion, but, of course, nowadays she could not have lived without a transfusion and sulfa drugs.

Another case was one of a recurrent tubal pregnancy. The first time she had a laparotomy and the tube was clamped, tied and removed. About a year from that time she became pregnant in the other tube. She did not want an incision made; so this time the cul-de-sac was opened, all the clots and loose blood drained out and drainage tube put in. She made a recovery after a long time.

In a good many cases of tubal pregnancy we have found that the rupture of the tube has been present for a number of days, or even weeks, when we first see them and when they are opened up a large blood clot is found organized in the cul-de-sac. They usually recover with or without a blood transfusion.

We know that tubal pregnancy is always an emergency case whether ruptured or not, but the patient does not always die at once, even though she is an emergency. Blood transfusion or plasma are given whenever possible.

A. E. BOSTICK (Iuka)—I well remember one case on which I was called into Alabama for consultation, and the diagnosis of ectopic pregnancy was made. The roads were in such condition at that time that the patient could not be moved to a hospital. She was operated on in my home. We found a large hematoma with small foetus and placenta. She was anemic and weak and had had some bloody discharge for five weeks. We saved her, and the recovery was made after a long time.

DOCTOR ANDERSON (closing)—I appreciate this liberal discussion of the paper. I am glad Doctor Hill brought out what he did about the cases that go on for a long time. Doctor Sutherland mentioned the puncture of the cul-de-sac, which we must do sometimes but must keep in mind the hazard of infection that is associated with this procedure.

The Use of Cotton Thread as a Suture Material*

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THERE ARE few, if any of us, who are not influenced in our daily lives by habit. A great many of us belong to religious and political organizations because of our inheritance or associations. It is often that we find ourselves following a technique which we have been taught in years past, with which we are familiar, and often hesitate to change our ways of thought and work, though we may realize a different method may be of advantage both to us and to others.

It is not the purpose of this discussion to convert any "catgut surgeon" to the use of cotton, but rather to familiarize you with its advantages over other suture materials, when properly used. If used other than in its accepted way a certain amount of grief will be encountered. This is due, not to the suture material, but rather to unfamiliarity or lack of knowledge as to its use. More than fifty years ago Halstead discussed the use of non-absorbable suture material, and certain principles that he fostered at that time are applicable today, both as to surgical technique and to the use of non-absorbable suture material. He advocated the use of silk. I became acquainted with this suture about fifteen years ago, and had adequate opportunity to see its many uses when properly used.

Meade and Ochsner justly deserve the credit for the popular use of cotton thread. Their investigations proved the logic and advantages of cotton as a suture material, and outlined the ways in which it must be used.

Suture materials are divided into two groups: absorbable sutures, as catgut and non-absorbable, as silk, nylon, cotton and wire. Catgut and silk are protein substances, whereas cotton is a plant fiber. This discussion will be confined to a comparison of catgut and cotton as a suture material.

The purpose of any suture material is to approximate the edges of a wound until healing takes place. A clean wound heals either by "wet healing" or by "dry healing," depending upon the suture material used to bring the wound together. Healing is a natural process and takes place in spite of the suture material used. Approximation of the wound edges is followed by an exudation of serum which tends to cement the edges together, and is followed by the second phase of healing, that of fibroplasia. It is reasonable to assume that any factor, such as suture material that increased the exudative stage, prolongs the healing time of the wound.

Where catgut is used, a wound heals by "wet healing," showing a variable response of exudation depending on several factors. Mass ligation of tissue, the use of large sizes of chromicized catgut, large gaps of tissue bridged with catgut, and trauma, all increase the exudation in the wound. Infected or potentially infected wounds show a marked tendency to exudation, and this tendency is greatly increased when catgut is used. This accounts for the large number of herniations and disruptions following the use of catgut in the presence of infection. This accident is less likely to occur when cotton sutures are used.

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*Read before the quarterly meeting of the Northeast Mississippi Thirteen Counties Medical Society, December 12, 1944, Baldwyn, Miss.

With the use of cotton as a suture material a wound heals by "dry healing," or exhibits much less tendency toward exudation. This explains the relatively less discomfort and swelling seen when cotton is used, as compared to catgut or even silk. Being a plant fiber, it does not induce as marked exudation, and as its fibers are naturally arranged close together when twisted, there is less tendency for proliferation of fibroblast into the strands of suture. Sinus formation is much less likely to occur when cotton is used, instead of silk.

Tensile strength of suture material is a very important factor in wound healing, not as a primary factor, which could induce strangulation of the sutured tissue, but as a means of approximation. At fourteen days catgut loses from fifty to seventy-five per cent of its tensile strength, silk loses thirty-five per cent, and cotton loses ten per cent (Mead and Ochsner). It has been stated by some authors that catgut and cotton sutures should never be used together. We thoroughly disagree with this, as we have used them together numerous times without incident, and feel that this statement is not justified. In comparison of sutures, the cost factor alone justifies the consideration of cotton thread. A five-cent spool of cotton will replace several tubes of catgut.

The advantages of cotton as a suture are many, and its disadvantage is only in how to use it. True, its use increases the operating time, yet this is adequately offset by the necessary care of handling tissue by using very small interrupted sutures without mass ligation and strangulation. This alone increases postoperative recovery. Anyone having had one wound sutured with catgut and skin clips, and having a subsequent laparotomy in which cotton is used, will gladly testify to the marked difference. The contrast in the two wounds is quite apparent to the unbiased eye.

More recent investigation has shown the prudence of getting the patient out of bed at the earliest and safest time. It is possible for a twelve-hour postoperative hysterectomy to be out of bed. Collins, at Charity Hospital, feels this early ambulation definitely aids the postoperative recovery, and does not hinder the patient's chance for a successful operative procedure. Except in elderly patients, our enthusiasm has not reached the twelve-hour stage; however, we do insist on our postoperative cases being out of bed by six to ten days.

In over three hundred major operative procedures using cotton, we have had one incisional hernia, which was reoperated successfully using cotton again. This we sincerely believe was due to a technical error in hurriedly closing the abdomen in a two-hundred-pound woman. Patients on whom cotton is used can return to their occupation much quicker, with more assurance of freedom than in those cases in which catgut is used. We have used cotton either exclusively or in the major part of operations for cysts and growths of the neck, thyroidectomies, breast amputations, gallbladder operations, stomach and intestinal perforations either from ulcers or extrinsic wounds, intestinal anastomosis, abdominal abscesses, appendectomies, hernias in which we used cotton exclusively, hysterectomies and perineal repairs, third degree lacerations of the perineum and rectum, ligation of varicose veins, amputations, repair of patella ligaments, tendon and nerve repairs, and for the closure of all skin wounds.

There are several factors to be considered in the use of cotton as a suture material. The size thread depends entirely on the individual surgeon's ability and the tendon under which the suture is to be tied. It is a good axiom to use the smallest suture possible, whether cotton, catgut, or silk. We prefer black cotton thread, as it is more easily seen, especially when cutting the knot. As there is no elasticity in cotton, one unfamiliar with its use will find it difficult at first to tie a square knot with it and not break the suture. Three ties are not necessary to hold a cotton knot, and the thread must be cut on the knot.

Sterilization can be accomplished by either boiling or autoclaving. Cotton should never be sterilized on the spool or on a metal holder, as the expansion of either of these will tend to rupture the fibers, lessening the thread's tensile strength. A sufficient amount can be wound on a rubber tube and boiled with the surgical instruments. Boiling, however, increases the tensile strength about ten per cent. We prefer to autoclave our cotton sutures on a cardboard holder, the cardboard being one-half the anticipated length of one suture to be used. The cotton is wound on this holder, and at the time of operation, cut along one edge allowing the sutures to be readily accessible. Sutures for the emergency room are wound on small pieces of cardboard and autoclaved in glass jars. We feel that it is unnecessary to soak cotton in a solution of one of the sulfonamides before autoclaving.

We have had a remarkably small number of incidents in which a suture was extruded. This factor, even if it were more frequent, would be a small price to pay for the many advantages of cotton thread. In the presence of infection its use is all the more warranted.

We most sincerely believe that cotton thread as a suture material is superior to catgut, silk or wire, if used properly, and definitely decreases postoperative pain and discomfort, and increases the rapidity of postoperative recovery, insuring a greater success to the surgical procedure.

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The question seems to be whether we shall have a four-year medical school or no medical school. We think Mississippi should have a medical school as a means to carry medical service out to every nook and corner of the state. It we have the medical spirit, the medical vision, the determination to give our people medical service, we can have it. Money and big cities do not make a medical school. Mississippi should furnish a school to educate doctors for our state, as well as some to spare to go out and bless the world with democratic medicine.

Dysmenorrhea; Its Etiology and a Logical Approach to Treatment*

J. P. FATHERREE, M.D.,
West Point, Miss.

DYSMENORRHEA HAS been a menace to patient and physician since the beginning of time and woman. The vast amount of literature on the subject and the innumerable number of prescriptions and cures are no more than an admission that the problem is unsolved. There is no single ideal treatment for the disease. It is my purpose in this paper to bring out the possible causes and to develop a routine of attack that will relieve the situation in the greater percentage of these patients.

The increased activity of the female in industry with the large amount of absenteeism and production loss resulting from dysmenorrhea makes it a greater problem to all of us interested in national defense, and particularly the industrial physician.

Dysmenorrhea, according to its derivation, means difficult, plus month, plus to flow. The long and satisfactorily inclusive definition is painful and difficult menstruation. There is an attempt to distinguish between genuine dysmenorrhea or functional pain and menorrhalgia, a symptom of some gross pelvic lesion that is clinically recognized. The generally accepted classification of this disease is first primary or essential dysmenorrhea in which there is no demonstrable pelvic pathology and on the other hand secondary or acquired dysmenorrhea in which pelvic pathology is the cause of the menstrual suffering.

One cannot stress too strenuously the necessity for thorough and complete examinations in these cases in order to arrive at a working classification of the disease. Results compatible with satisfactory clinical suffering at each menstrual period makes for a permanently ill female.

The case history of these individuals is most important: the age of the patient, age at the onset of menses, regularity of menstruation, gain or loss of weight, married or single, nulliparous or parous and the number of pregnancies. Any miscarriages? Is there history of venereal disease, menorrhagia, metrorrhagia, oligomenorrhea? What is the relation of the onset of pain to age and period? What is the amount and character of the menstrual flow? Does the pain progress with the period or does it fade out? Are there any clots? All of these simple thoughts are pertinent and may give a clue that will lead to an accurate diagnosis.

In no diesase is the complete overall evaluation of the patient more important. One must know the environment at the present, the environment at the onset of menstruation. What is the patient's attitude toward and understanding of the menstrual period? One should have an understanding of the individual's temperament and a fair estimate of her pain threshold.

Don't overlook the fact that these individuals are suffering and in their own minds they are acutely ill, regardless of what the examining physician might think.

An adequate pelvic examination by necessity includes inspection, palpation and indicated laboratory procedures. One must observe carefully the distribution of the pubic hair, the size of the clitoris and labia, their color, the presence of a discharge and color and character of same.

Speculum examination may reveal much information. What is the color of the vaginal mucosa? Is it healthy in appearance or is it ulcerated? If ulcerated, what is the character of the ulcer and what is causing it? What does the cervix present? Is it cystic or ulcerated, eroded or everted or lacerated? Is the cervical canal filled with a discharge? What is its character? Smear it and determine the cause. Determine the patency of the cervical canal with a probe. What is its contour? Is the cervix infantile; is it long or short, is there a pinhole os? Before removing the speculum use its tips to milk the cervix. If a discharge presents itself, smear it, determine the cause. Gonorrhea may be quite elusive in the female.

Palpate Skene's glands, Bartholin's glands. Is the uterus prolapsed? Is it soft or hard or irregular? Are there any masses present? Is the cervix freely movable with or without pain? What is the position of the uterus? Are there any adnexal masses present? Are they tender? Are they hard or soft? Is there any thickening of the broad ligament? Is the perineum relaxed? Is there a rectocele or cystocele present? Do a rectal examination. What does it reveal?

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*Read at the quarterly meeting of the Thirteen Counties Medical Society, Corinth, Miss., Sept. 1944.

It is only after such a complete examination that one can adequately classify the dysmenorrhea.

The acquired dysmenorrheas all have accepted treatments and once the cause is ascertained they are readily cared for. We shall not consider such treatment in this dissertation, but we do wish to mention here only some of the factors contributing to this class of menstrual pain.

1. Endometriosis
2. Retroversion of the uterus—here the dysmenorrhea may be due to position of uterus, kinking of cervical canal or prolapsed, cystic, edematous ovaries.
3. Bicornate uterus.
4. Acute antiflexion of the uterus with impaired patency of the cervical canal.
5. Adenomyosis.
6. Fibroid tumors, subserous, intramural or submucous types.
7. Polyps.
8. Cystic ovaries.
9. Ovaries with markedly thickened capsules whether due to inflammatory disease or congenital in origin.
10. Masturbation with pelvic hyperemia. This is usually detected by hypertrophied labia.
11. Membranous dysmenorrhea. Usually occurs in infected cases with hyperplasia of the endometrium.
12. Systemic causes such as debilitating diseases: tuberculosis, and anemias.

Nasal dysmenorrhea and intermenstrual cramps or Mittelschmerz disease are not considered in this paper.

We shall conclude that all of these secondary dysmenorrheas can be handled appropriately once an accurate diagnosis is had. Let us move on to the problem of every physician, whether general practitioner or specialist, regardless of his field.

Primary or essential dysmenorrhea; some understanding of the nerve supply and the physiology of the genitalia is necessary in discussing this subject.

The efferent pain fibers from the uterus travel essentially in the presacral nerve and are exclusively sympathetic whereas the parasympathetic impulses to the bladder, rectum and uterus are supplied by the pelvic or erigens nerve. All of this autonomic nerve supply both sympathetic and parasympathetic passes by way of the uterovaginal plexus more commonly known as the ganglion of Frankenhauser, a bilateral thin sheet of fibers with fascia spread over the anterolateral aspects of the ampulla of the rectum.

Irrespective of other differences in opinion it is universally agreed that a thorough resection of the presacral nerve stops uterine pain, and function is not impaired if the parasympathetic fibers and the pudendal nerve are left intact.

It is agreed that primary dysmenorrhea is a disturbance or dysfunction in the mechanism of the uterine musculature. It may be the entire organ or a spasm of the cervical fibers or a less clearly defined disturbance.

Some of the theories attempting to explain this type dysmenorrhea are: 1) Whitehouse's theory of macroscopic waste particles not being able to empty from the uterus without effort;

2) Endocrine imbalance. Novak and Reynolds believed hyperestrogens were causitive factors. Progestin however does not relieve it and estrogens sometime do.

3) Cervical spasm on a muscular or neurogenic basis may cause excessive effort in emptying. However some cases have an extremely large os and canal.

4) Hypoplasia and antiflexion. This fails because many are neither hyperplastic nor antiflexed.

5) Disturbance of pelvic autonomic nerves, tension, fatigue.

6) Lesions in the pelvic plexus; reflex function.

7) Psychogenic factors—a very important theory.

8) Altered carbohydrate metabolism. Insulin has given relief in some cases.

9) Extragenital factors explained as "allergic states."

No one theory can adequately explain all cases. No single treatment can relieve all cases.

R. B. Greenblatt of the University of Georgia School of Medicine classified his patients after careful study as follows:

1. Psychoneurotic—A large number of psychoneurotic patients experience dysmenorrhea as a mechanism of escape from some unsolvable situation. Psychotherapy is indicated.
2. Hyperfeminine—Large breasts, increased breadth of beam, soft skin, maternal at-

titude and pose. Testosterone therapy gives the best results.

3. Amazon—Broad shoulders, narrow hips, athletic type. Estrogen therapy is indicated.
4. Hypothyroid — tendency to increased weight, full neck, dry skin, cold hands and feet, or maybe thin, underweight and a low protein consumer. Thyroid therapy with high protein diet is best.
5. Hypopituitary, trochanteric fat, tapering fingers, disproportion of trunk to lower extremities. Anterior pituitary extracts are most efficient.
6) Normal. By far the greater percentage of women fall into this group. Greenblatt also gives classification on the basis of the uterus:

Normal. 75 per cent fall into this category.

Infantile. With long infantile cervix. Here the stem pessary is useful. Infantile without this type cervix may be due to hypothyroidism or local lack of estrogens or failure of response of uterine tissue to patient's own estrogen. Thyroid or estrogens or both may be effective.

Bulky uterus. Often due to increased local response to estrogens. Progesterone therapy may suffice.

Retroverted uterus. This may cause congestive phenomena or improper flow. Check by using a Hodge pessary. If results are good, suspension may be done for permanent relief.

Therapy for dysmenorrhea is to be considered next:

Medical therapy. Propadrine hydrochloride grs. ¾, aspirin grains 3, phenacetine grains 2, one capsule every 4 to 6 hours.

Antispasmodics—Transetin, 1 to 2 tablets every 4 to 6 hours.

Benzedrine sulfate 5 mgms. every 4 to 6 hours for 2 or 3 doses.

A good laxative a day or so before onset of menses along with other good body hygiene.

Operative therapy—Dilatation and curettage may give temporary relief. Permanent relief in only a small percentage.

Alcohol injection of Frankenhauser's plexus, 1 cc. of 70% alcohol injected into each side. Of doubtful value unless the ganglion is accurately located. Treatment may cause sloughing from injection.

Presacral nerve resection gives permanent relief in 70 to 80 per cent of cases but should be a last resort.

Hormonal therapy — Thyroid, grains ½ daily. This may be gradually increased to tolerance if necessary. It may be given on clinical finding without basal metabolic rate if the patient is closely observed.

Estrogens. Orally in liquid, tablet, or capsule form 1000 to 2000 I. U. daily during the intermenstruum. Parenterally, alpha estradiol benzoate 2000 to 1000 rat units or apha estradoil dipropionate 1 to 5 mgms. once weekly throughout the month. Suppositories—one .5 mgm. stilbestrol suppository each night during the intermenstruum.

Progesterone. Orally, anhydro-hydroxy progesterone a total of 6 to 12 tablets of 5 to 10 mgms. given during the last 10 days of cycle. Parenterally 2 to 10 mgms. every 4 to 5 days during the last half of the cycle.

Testerone. Orally, methyl testerone 1 to 2 tablets or 10 mgms. daily. Parenterally 10 to 25 mgms. weekly. Inunction 1 to 2 mgms. rubbed into the skin daily. This needs to be kept up for several months. It is necessary to be on the alert for any masculizing signs.

Gonadotropins. Anterior pituitary extracts equine gonadotropins or anterior pituitary substances administered at weekly intervals in adequate dosage may surprise one with results.

In many cases much relief can be had by splinting the ovaries. That is by substitutional therapy one produces an anovulatory period for two or three months. This is easily done by using .5 mgm. stilbestrol daily for the first 15 days of the cycle and 1 to 2 mgms. of corpus luteum hormone for the last half. This works exceedingly well where large psychic factors are involved.

Prannone, distributed by the Shering Corporation, in 10 mgm. doses orally daily will care for the progestin phase of this treatment and quite often the dosage may be reduced to 5 mgms. daily.

It is readily seen from what has been said that in carefully studied patients the routine can be selected. Certainly in the virginal patient one should try medical and endocrine therapy. In the non-virginal indications are of greater value at the onset of treatment.

I, personally, prefer the following routine in handling these cases: a thorough and complete history and physical examination is done for the purpose of classifying the dysmenorrhea primary or secondary, for evaluation of the pain threshold in the particular individual, and for obtaining an overall estimate of the psycho-somatic individual and establishing confidence. Indicated laboratory work is done.

In mild cases medical therapy is first tried for one to two months. I use Rionna capsules manufactured by Sharpe and Dohme with fair results, one given every four hours.

In cases that fail to respond to medical therapy or which are more severe in the beginning, I use endocrine therapy according to indications from Greenblatt's classification. If this does not suffice in two months' time, I splint the ovaries with stilbestrol and prannone. After one or two months of relief on this routine it is stopped. If there is recurrence of the dysmenorrhea, I proceed with dilatation, curettage and insertion of a stem pessary. The tissue obtained on curettement is examined to determine the phase. This sometimes gives valuable information. I try to leave the pessary in for at least two weeks. Occasionally one will have to remove it sooner. I may say here that once the dilator is inserted and the first squeeze put on, one can speculate on the results. The soft, easily dilated cervix is not likely to respond to this therapy while the hard, contracted, long infantile and stenotic cervix is most sure to make you happy.

Failure of this procedure forces one to consider presacral sympathectomy. This is a beautiful spot for retrospection. Laparotomy is not without morbidity and mortality. The decision is not always easy. One must remember the opiate addict resulting from prescribed narcotics or self administered paregoric. One must be sure of the previous course of therapy. If after careful study no recourse is found, laparotomy may be performed. While the laparotomy is done for the purpose of a presacral sympathectomy, many other causative factors may be revealed; polycystic disease of the ovaries, small cyst riddled ovaries doomed to early failure. Ovaries with a long meso that impairs the venous return leaves a boggy, edematous, malfunctioning ovary. Small areas endometriosis — other pelvic pathology that may have evaded detection on previous examination may be encountered.

Resection of the ovaries is rarely worthwhile. Only occasionally is removal justifiable. Hysterectomy may be preferred. Support of the meso and occasionally a perivascular sympathectomy of the ovarian vessels may be the choice. Some men are resecting the ovarian artery and vein to relieve the surplus blood supply and subsequent impaired venous return.

Cauterization or complete excision of endometrial transplants may care for the endometriosis.

If no pathology is revealed, the sympathectomy may be done without impairment of future function. Care must be exercised that all the nerve fibers are severed. Results are favorable in approximately 90 per cent of the cases. Again, let me repeat that a presacral sympathectomy will not relieve dysmenorrhea of ovarian origin.

DISCUSSION

DR. THOMAS WOLFORD (Columbus)—I find that in many of these cases we find no pathology on physical examination to cause all their dysmenorrhea. Experimental work has proved without question that there are some individuals who have symptoms of dysmenorrhea and other evidences of high estrogenic blood levels which can definitely be traced to lack of vitamin B by actual study of estrogenic blood levels. These patients cannot metabolize estrogens in their blood stream due to lack of vitamin B. I have had some beautiful results from this type of treatment in cases free from pathological disturbances. They should receive large doses of the B complex three times a week by hypodermic for five or six weeks, then take it by mouth for several months. This usually relieves premenstrual tension and tightness of breasts preceding menstrual periods.

In cases with a tight internal os dilatation and curettage will be of temporary relief. These cases can be best helped by the use of a proper size pessary, left in place for two weeks, no longer, in order to keep from increasing fibrosis of the cervical canal. These individuals must be followed closely in order to keep the os open. The routine use of the probe to break down the adhesions that take place in the cervical canal is absolutely essential, as the canal will frequently close down even after the use of a pessary.

Presacral sympathectomy, in our hands, has been very helpful in selected cases. It is necessary to expose these sympathetics adequately and remove about 5 cm. of the nerve fibers. It is a relatively simple procedure if one is absolutely familiar with the procedure. It has been suggested that these patients having had a presacral sympathectomy that will experience a similar type of painless labor as those patients having a caudal analgesia.

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BETTER MEDICAL SERVICE

According to the *Progressive Farmer* in many states in the North and West seventy to ninety per cent of the women go to hospitals for their confinements, but in the South only about twenty out of a hundred are confined in the hospital and less than ten in Kentucky and Oklahoma. Other states in the union have more than twice as many hospital beds per thousand population as have the fourteen Southern states. Also with twelve per cent of the nation's income the South must support, train, and educate twenty-nine per cent of the nation's children.

The Southern states have less than half as many hospital beds per population as the rest of the United States. According to our last study of hospital beds, Mississippi has the lowest number per population of any state in the union and the fewest occupied. But our people have become hospital-minded the last two or three years as have the people of our nation. Two years ago to take care of the increase would have required a new 732-bed hospital every day in the year.

According to the statisticians, it seems that Mississippi should have about two thousand beds for tubercular patients, but it actually has about five or six hundred, only about fifty for Negroes. More than two Negroes die each year to one white person from tuberculosis in our state. But as long as we put a grasshopper estimation upon ourselves, feed medical schools outside of the state with our best young men who will never return to practice, and send our pay patients to the specialists of the surrounding cities, conditions will grow worse. If electricity can go to the darkest spots in the state, if free delivery of mail can be carried every day to the old mill stand on Yellow Rabbit and Vinegar Bend, if farm education can be carried to Hatchie Hills and Sullivan Hollow, then it is only the fellow whose mental machinery has been frozen for the "duration" who says medical service cannot be fostered through a four-year medical school that has a vision for service.

§

Adult education is the order of the day. This applies to medical education for the busy practitioner. One day courses with patients for consultations out at the small hospital center offer more than almost any one thing as a means to giving the rank and file better medicine and thereby heading off medical regimentation which would be a tragedy in this country. Life is too short for any one person to learn very much compared with what there is to be known, but certainly every professional man should keep active to the end and his last days should be his best ones. When the practitioner and the real specialist meet out in the field of medical service with the determination to give all the people the best there is known in medicine and to find out a lot of things that are not known, then we shall have a new day in medicine and the fear of fear will vanish.

If the state of Virginia can have two medical schools with two and a half million population why under Heaven can't Mississippi have one four-year school with two and a quarter million population? When you take the vision, the inspiration and the personality out of a school its soul is gone. Bright lights have overshadowed human thinking. Expensive equipment is fine, but unless you have the human "noggin" button pushed on to operate it, it just does not function.

§

Any man who has the "soul of a surgeon" would be glad never to wield another knife if his patients could be so perfect as not to need even a scratch to relieve suffering and prolong life. The man who does not think deeply and sincerely and strive to do his part to produce a perfect human specimen who will not need an operation should never be licensed to do surgery.

§

If a four-year medical school is to succeed in our state, and indeed it could in the biggest way of any in the United States, politics must first be tabooed. No self-promoting political upstart should be considered for its head. It must also be a medical school for every man, woman and child in the state. All the clinical material in the state must be available to be served and to serve. The central school and hospital must be affiliated with the small so that all will unite in training interns, nurses, and technicians in a well-rounded education that will equip them for the very best service in the profession yet known.

§

Dr. Tinsley B. Harrison, dean of Southwestern Medical Foundation College, rises to suggest that much postgraduate work will be needed after the war. This is quite true. The young doctors who were rushed through school and rushed into the army will need postgraduate work before they are able to settle down to every day cornbread and beans in daily practice such as delivering babies, treating their colics, looking after nervous women and senile men. The men who have been so tied on the job in civil practice will need to go to the centers or have the latest learned in war brought to them also. We will continue to have traumatic surgery on the civil firing lines. The practitioner will need to know about shell shock and many other conditions met with and treated in the army. Medical information must be kept liquid, flowing back and forth between the practitioner and the research men, working it into the most usable form of the most people. Every country community must have the advantage of blood plasma. It must be able to donate the blood, have it processed and brought back to the little hospital for use for our civil casualty list which still outnumbers those on the battlefield. Southwestern seems to be determined to be the leader in medicine for the South in research and specialization, and maybe not only search and specialization. Success to this great institution.

§

Come to think about it, we have quite a bit of regimentation in our medical education system. The rich genius with a high IQ is pushed to the big schools and then to the big centers to practice while the poor average young man with a professional mind, a medical soul, and a missionary heart, has a mighty hard road.

RESOLUTION

The following resolution was unanimously passed by the Mississippi State Medical Association Tuesday, May 8, 1945.

"That the Mississippi State Medical Association offer to Governor Thomas L. Bailey all encouragement and assistance possible to make a survey of medical, health and hospital facilities existing in the state at this time, in order that an evaluation of the present and future needs of the state may be better determined and that Mississippi may be in line to request assistance from the Federal Government under the provisions of Senate Bill Number 191 (the Hill-Burton Bill."

This motion was offered by Dr. Felix J. Underwood, seconded by Dr. T. M. Dye, and unanimously passed.

The Council of the Mississippi State Medical Association, in its meeting in Jackson May 8, approved holding the present set-up of officers as elected in 1944. If the war should end earlier than anticipated, it was suggested that a meeting might be called before next May; otherwise, the association will continue to function under the same leadership as of the past year.

Book Reviews

TECHNICAL METHODS FOR THE TECHNICIAN, by Anson Lee Brown, M.D., Columbus, Ohio. Published by the B-B Printing Co., 329 South Fourth St,, Columbus, Ohio. Price $10.00.

Good laboratory facilities are now a necessity for the application of good medicine. The well trained technician is now more important than ever with our doctor shortage. *Technical Methods for the Technician* by Dr. Anson Lee Brown seems to be a most helpful book for the average technician. The author begins by describing the microscope, its care, and how to use it, then gives a description of simple laboratory operations discussing fundamental principles. More than fifty pages are given to urinalysis. Blood examinations come in for a big section in the book. It seems that no important detail is left out. Blood counts and the counting chamber, and blood chemistry are given due consideration.

Full details of the Wassermann test, the standard Kahn, Kline, et al, are described fully. Tests for typhoid, undulant fever, tularemia, dysentery and typhus are clear. PART SIX is given to tissue sectioning and staining, apparatus and reagents used. One section is given to important laboratory data and the correct spelling of important words.

The book contains 706 pages, is light and easily handled, good print. It is Doctor Brown's third edition and is brought right up to date. Dr. Brown, director of a clinical laboratory, also operates a school for technicians. It does seem that every technician should have a copy of this book.

SKIN GRAFTING OF BURNS by Drs. Brown and McDowell of Washington University, St. Louis, Mo. Published by J. B. Lippincott Co., Philadelphia. The book contains 204 pages with 131 illustrations.

The contents of this up-to-date book are divided under sixteen different headings: preliminary survey, early general care, spontaneous healing of burns, preparation of wounds for skin grafting, varieties of skin grafts, application of thick- split-skin grafts, application of free full-thickness grafts, pedicle flaps, contractures, regional repairs of trunk and extremities, regional repair of head and neck, homografts, faults of skin grafts, final results in burned patients, and treatment of burns in World War II. Under early general care the treatment of shock and the use of plasma and whole blood are of special interest, as well as first aid treatment, drainage, and débridement.

The discussion of the different types of grafts, why used and how will be found most helpful. The treatment of burns in World War II constitutes a most interesting chapter, with the discussions on the value of sulfonamides, penicillin, pressure dressings and grafting given due space.

Deaths

DR. W. P. WEBSTER

Dr. W. P. Webster died December 15, 1944, at the age of 74 years, at his home on Oxford, Route 4.

In 1896 Dr. Webster was married to Miss Holland Knight, who survives him, together with three of their grandchildren. Their only son, Fielder Webster, died in May, 1940. Of the grandchildren, Mrs. L. E. Wordsworthy, living in Texas, and Lieutenant Fielder Webster about to sail for overseas duty, could not be present at the funeral services.

Also surviving Dr. Webster are three brothers, Mack and Herman of Oxford and Stone Webster of Oklahoma City, Okla., and two sisters, Mrs. John W. Wade of Oxford, and Mrs. G. G. Wilson of Oklahoma City, Okla.

DR. THOMAS TILTON BAILEY

Dr. Thomas Tilton Bailey, of Port Gibson, died October 19, at his home following a fall.

Dr. Bailey was born in Lincoln County March 4, 1886, was 88 years of age. For many years he practiced his profession near Patterson, going to Port Gibson to practice medicine 44 years ago. He also operated a drugstore there for several years.

Besides his wife, formerly Miss Helen Sharbrough, he leaves two daughters, Mrs. James Nolan of Washington, D. C., and Mrs. Harry Haas of Port Gibson. An only son died about two years ago at Rolling Fork. He leaves one brother, Lott Bailey at McComb.

DR. HUGH ROBERT MILLER

Dr. Hugh Robert Miller, 73, prominent Bolivar County physician, was buried in Greenville April 20. His address was Winterville, Miss.

A native of Pontotoc, Dr. Miller received his medical degree from the University of Tennessee, Nashville, Tenn., and served as an instructor in the Medical School of the University of the South, Sewanee, Tenn., before coming to the Delta as physician for the Delta and Pine Land Company at Scott, Miss.

He served in the First World War as a captain in the Army Medical Corps and after the war resumed practice at Lamont. The widow, five daughters, a sister and a brother survive.

DR. WILLIAM H. COOPER

Services for Dr. William Harvey Cooper, 67, physician and planter of Catchings, Miss., who died May 13, were held at Catchings Baptist Church by the Rev. Dan Morton and the Rev. R. B. Patterson of Memphis. Dr. Cooper was born in Neshoba County, received his medical education at Mississippi Medical College, Meridian.

Dr. Cooper was a civic leader in the community, serving as chairman of War Bond drives and acting in other capacities for the welfare of the Delta region.

He leaves his wife, five daughters, Mrs. Wiley Ezell, Meadville; Mrs. W. J. Spencer and Miss Angeline Cooper, Catchings; Mrs. W. C. Skates, Avon; Mrs. H. J. Logan, Duncan; five sons, H. C. Cooper, New Orleans; Alton B. Cooper, Glen Allan; J. M. Cooper and Henry Cooper, Catchings, and Seaman J. M. Cooper in the South Pacific.

Interpreting Medical Literature

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DERMATOLOGY

Archives of Dermatology and Syphilology, February 1945, No. 2, p. 139, 141, and 142.

The "Lupus Erythematosus" Concept: An Attempt at Integration. John H. Stokes, Herman Beerman and Norman R. Ingraham, Am. J. M. Soc. 207:540 (April) 1944.

Stokes and his associates attempt to summarize and clarify recent suggestions as to the nature, cause and cure of lupus erythematosus. They look at the disease in the light of allergic reactions to infection, regarding the chronic discoid form as related to the follicular "ids" and the systemic form as an expression of vascular injury and allergy. They note the reports of observers who regard the cellular and connective tissue changes as manifestations of allergy but point out that there is not as yet a general acceptance of colloid degeneration as a sign of allergic reaction. Discoid lupus erythematosus can be hypothetically accounted for as follicular (seborrheic) infection plus allergic reactions to that infection (yeasts and staphylococci). Dissemination of a discoid of follicular erythematous lupus with the appearance of desquamative patches with follicular atrophy over other parts of the body is simply an extension of the follicular "id" beyond its conventional locus under conditions affecting the general allergic state of the individual. On the other hand, the reaction that underlies the chronic discoid process may at a suitable provocation pass over into the field of vasculo allergic manifestations and assume the far graver characteristics of the so-called acute disseminating type of the disease. The authors state as to the nature of the infection to which allergy develops or exists no absolute decision can be had at this time and the contribution of a concept of infection-allergy to the treatment of lupus erythematosus is largely negative. They regard therapy with bismuth as equally effective and safer than treatment with gold. They warn that sulfonamide compounds must be used with the utmost caution, though they are helpful in some cases.

Reviewing the suggestions of others, that lupus erythematosus may be subject to endocrine influences, they state that "it would appear justifiable to undertake further study of possible relationships between gonadal hormones and lupus erythematosus and to investigate the possible usefulness of castration in female patients more extensively." Lynch St. Paul.

Cancer Associated with Acanthosis Nigricans: Review of Literature and Report of a Case of Acanthosis Nigricans with Cancer of the Breast. Helen Ollendorff Curth, Arch. Surg. 47:517 (December) 1943.

The case of a 47-year-old woman who had cancer of the right breast and acanthosis nigricans is presented. After removal of the breast the acanthosis nigricans tended to subside for a while. The patient died about one and one-half years after operation. Permission for opening of the thoracic cavity was not given. Wide spread metastases were found in the liver, left kidney and left adrenal gland. Acanthosis nigricans had reappeared a few months after operation and had spread over wide areas of the body. This is the ninth case of mammary cancer associated with acanthosis nigricans. The high malignancy of this tumor corresponds with the character seen in all carcinomas accompanying acanthosis nigricans are tabulated. Benign and malignant acanthosis nigricans are identical. Instances in which characteristics of the benign and of the malignant types were shown successfully or simultaneously are presented. The presence of acanthosis nigricans and cancer in the same patient is not coincidental, since (1) the percentage of cancer in patients with acanthosis nigricans is extremely high; (2) the two diseases become manifest at about the same time and run a parallel course, and (3) many young persons suffer from cancer and acanthosis nigricans. Previous concepts of the causation of acanthosis nigricans, such as those attributing it to disturbances of the sympathetic nervous system or of the adrenals or other endocrine glands, should be discounted and cancer considered the essential etiologic factor of the disease. In cases of malignant acanthosis nigricans some properties of the tumor may activate the cutaneous lesions. In the benign type the same role of activation seems to be played by one of the sex hormones. There are a large number of cases of benign acanthosis nigricans on record in which the disease appeared or began to spread at puberty. The role of cancer in the family history of patients with acanthosis nigricans and cancer speak for a genetic relationship between the two diseases. Criteria of benign and malignant acanthosis nigricans are given. Curth, New York.

EARLY TREATMENT OF THE DORSUM OF THE HAND. P. D. Braddon, M.J., Australia 1: 368 (April 22) 1944.

Early epitheliomas of the dorsum of the hand are almost invariably of the squamous cell variety. In some thousands of cases only six instances of basal cell epitheliomas were encountered. This type of lesion, up to a little over 2 cm. in diameter, is best treated surgically. Advanced epitheliomas are growths over 2 cm. in diameter. Two hundred patients with advanced epitheliomas were treated by radon molds with consistently excellent results. In the treatment of this lesion, radium or radon needles or seeds should never be implanted. The dose delivered is always 6,000 r over a minimum period of 10 days and a maximum period of sixteen days.

PEDIATRICS

STUDIES OF THE NUTRITIONAL STATE OF CHILDREN IN UNOCCUPIED FRANCE IN THE FALL OF 1942—Harold C. Stuart, M.D. (*Journal of Pediatrics*, September, 1944).

The author refers to findings as follows: A review of the findings of Kuhlmann and his collaborators at the Institut de Recherches d'Hygiene in Marseilles, interviews with physicians and health officers qualified to speak from knowledge of actual conditions, and observations made during travels in Unoccupied France between September 3 and November 7, 1942, lead me to certain general conclusions regarding the state of nutrition of children prior to the inauguration of the latest program of the American Red Cross for their benefit.

There had been a considerable increase in the incidence of diarrhea during the summer of 1942 among infants and young children in Unoccupied France, due principally to a deterioration in the quality as well as a lack in quantity of milk. Young children had in other respects enjoyed customary health and were for the most part in fairly good nutritional state. From eight years onward, but especially between twelve and eighteen years of age, there had been a noticeable increase in the number of children showing evidences of undernutrition.

During the summer of 1942 a considerable proportion of the school children in large cities had been sent to camps such as those organized by the American Red Cross, or to board with families living in localities having more ample stocks of food. Many of these children gained from 2 to 4 kg. during three to five weeks' vacation periods. During these months summer garden products also temporarily improved diets which otherwise had been progressively worsening. In spite of these alleviating factors, the evidences of chronic fatigue, lack of vigor, and inadequate weight for build had gradually become more marked and widespread during the preceding year. However, no important increase in the incidence or severity of rickets had been noted and other deficiency diseases had remained uncommon. There had been some increase in the incidence of anemia, presumably of the nutritional type, and occasional cases showing protein deficiency had been noted. The blood levels of vitamin A and C had been continually low in samples on which tests had been made from time to time at research centers.

Dietary surveys left no doubt but that the majority of children were taking diets which were very inadequate in total calories and the responses of listlessness and inactivity had been noted by many observers. Diets were for the most part deficient in protein and especially in the proportion of total protein derived from animal sources. They were also lacking in calcium. The situation in respect to the vitamin content of the diets varied with locations and between seasons, but the probabilities were that the provision of vitamins A, C, and D had been quite generally unsatisfactory.

As a result of these, it may be concluded that a state of general moderate to marked undernutrition was widespread in Unoccupied France in the fall of 1942, at least among children over 10 years of age. There was little evidence, however, that this undernutrition had generally reached a stage in which health had yet been profoundly affected, life endangered, or development more than moderately retarded. Under these circumstances it was felt that the supplement of 250 Gm. of milk daily which the American Red Cross was planning to give in most instances to children between ten and fourteen years of age would be most helpful. It was not sufficient to meet all the inadequacies in their diets and failed by a wide margin to correct the deficiency in calories for the older children, but it would serve as a valuable protection against the more serious consequences of the food situation which then existed.

COMMENT

There is no doubt that malnutrition existed in France at the time that Dr. Stuart made his observation and report, but from the new reports coming from that country, we would expect a very much more pronounced state of malnutrition now than then.

To evaluate properly the different types and causes of malnutrition, one must make a very careful examination of the child which would include all that he has indicated together with blood counts, urine, and feces examination, to determine the exact cause and then one can arrive at a satisfactory basis for treatment. It might be well to mention right here and drop a word of caution in regard to the administration of great quantities of milk, since it is found in the practice of every pediatrician that milk is often the cause of anemia and other vitamin deficiencies which are the results of the lack of other foods in the diet when great quantities of milk are ingested rather than normal amounts. It is often our experience that mothers will come in with babies, one and one-half to two years, and some three years old, who have been kept on the bottle or the breast so long and so frequently that the child would not eat other food and, consequently, we would have a state of malnutrition with a resultant lack of vitamins and other evidences to indicate a true state of malnourishment.

This is a very interesting article and deserves careful reading to evaluate its importance but we felt it necessary to call the attention of our readers to the habit of many mothers of keeping babies on the breast or on the bottle entirely too long and in that way, crowding out other essential foods in the child's diet.

The medical profession has followed the conservative idea of awaiting until a patient becomes sufficiently ill to seek advice. Thus, they have always been handicapped in the treatment of pulmonary tuberculosis because of the fact that a patient ordinarily is not seen until he has symptoms. In tuberculosis this can only lead to grief, for by the time symptoms appear the disease has passed the optimum period for treatment. The use of chest x-rays of the apparently healthy is the best known method of determining early tuberculosis.

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The Role of the County Health Department in Tuberculosis Control*

R. L. WYATT, M.D.
West Point, Miss.

Public health has made such strides that the people of the state on the whole have seemed to lose interest in a disease like tuberculosis. They have developed a complacency which reflects they have long since forgotten or know little about its record of devastation down through the centuries. Having been told that the death rate from tuberculosis has dropped from first place to sixth or seventh place as a cause of death has only added further to their sense of security. It is evident that they need to be reminded that tuberculosis still kills more people than any other bacterial disease, and that certain precautions for more adequate protection and control are in order. Physicians too need to be on the alert for early symptoms, especially in young men and women between the ages of 15 and 25, where the incidence of tuberculosis runs highest.

Public health workers in some instances have allowed tuberculosis control to become almost the step-child of their public health program. This may have been due to the increasing emphasis which they have felt compelled to give at this time to such important diseases as syphilis, gonorrhea, and certain other communicable diseases, for which therapy and control measures have become more specific, and which in return afford a greater sense of accomplishment for the effort expended. It nevertheless remains to be pointed out that full use has not been made of the knowledge now had for tuberculosis control. If full advantage could be taken of present known methods of control, the disease might be reduced to a place of minor importance within a generation or two. While the results of today's miracle drugs have proved disappointing as applied to the tubercle bacillus, it is not necessary to delay action on an effective program of control, awaiting the development or discovery of a positive therapeutic agent. Prevention should be the first aim, and the only known satisfactory method of preventing tuberculosis in the human body consists in creating an environment free from tubercle bacilli. The first step, therefore, calls for finding and isolating all persons who are ejecting tubercle bacilli from their bodies.

The Division of Tuberculosis Control recently established in the United States Public Health Service promises to provide such assistance in case-finding, education, personnel training, and in the provision of local and state facilities for more adequately coping with the problem upon a coöperative federal-state basis. The value of finding tuberculosis early and at a time when cure may be relatively simple has proved itself many times in the work of the Field Clinic of the Sanatorium. Through the new program, it is anticipated that x-ray diagnostic facilities will be made available to a much larger number of the population than has heretofore been possible. The time has come for the fullest utilization of present knowledge and facilities by physicians, public health workers and everyone to the end that tuberculosis, long-time enemy of man's health and a major liability to the community, may be eradicated once and for all.

To achieve this goal there must be widespread education to reach those who will be responsible for the success of the program as well as the patients and the general public who will be affected by it. The public health worker must have a thorough knowledge of the plan of control to be followed in order to carry out better his or her part of it. The private practitioner of medicine must also have a complete understanding of the plan of tuberculosis control so that he may give fullest coöperation and actively participate in the program. The physician is a very necessary and essential cog in the machinery for tuberculosis eradication, without whose support it would hardly be possible to make much progress in this field. Close teamwork on the part of the public health worker and the physician is basic to the success of any effort directed at curbing disease.

Case Finding

An effective case finding program is of

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*Presented before the Mississippi Public Health Association, Jackson, Miss., December 8, 1944.

course the first step in tuberculosis control. Prompt reporting of tuberculosis cases to the local health departments by physicians and institutions is imperative. Often many of the cases coming to the attention of the physician are advanced cases which have been prompted to seek medical service because of the symptoms provoked by the disease. Likely these patients have already begun to spread tuberculosis. Therefore it is not enough to wait until the patient allows the disease to reach an advanced stage before anything is done about it. It must be discovered early. Including chest x-ray or tuberculin testing as a regular part of the physical examination is a helpful procedure. Since the beginning of the war the Selective Service System and the armed forces have x-rayed thousands of young men and women called to military service. Many cases of tuberculosis were uncovered and these were called to the attention of the state and local health departments. It is obvious that the next step in this vast program is the examination of contacts of known cases, suspected cases, primary cases, and reactors to the tuberculin test. Time and care should be taken to explain to all active or suspected cases the nature of tuberculosis and to secure the patient's coöperation in getting familial and extrafamilial contacts in the hope of locating the case-behind-the-case. Every means possible should be utilized to see that these contacts are examined as soon as possible. It has been found that the older the contact is, the harder it is to get him in for examination.

Some of the local health departments have succeeded in working out a very good program of pre-employment and annual chest x-ray examinations with local industries with excellent results. It is to the advantage of industry, the community, and the individual that such examinations be routine. It is hoped that all counties will find it possible to follow the example which has been set in this regard, working in conjunction with the Division of Industrial Hygiene of the State Board of Health.

At the present time it is necessary to carry out all case finding and subsequent follow-up phases of the tuberculosis control program with facilities already available. In spite of war-time difficulties, most counties now are having chest x-ray clinics at least once each month. It is recommended that the health department staff might give multiple services to any one group coming for attention, combining immunization and other services at the same general conference. It has been found in our county that general medical and nursing conferences located in the population centers throughout the county are more effective and reach more people than time-consuming home visits. Home visits are now being made only to special types of cases.

In considering isolation, treatment and follow-up of tuberculosis cases, it is pointed out that the patient with the primary type of tuberculosis is almost never a menace to those around him, from the standpoint of disseminating tubercle bacilli. Furthermore, institutional care does not seem to change the course of the primary disease or prevent those infected from being potential cases of clinical pulmonary tuberculosis during adulthood. Therefore, it is important to follow such cases, especially during young adult life at which time they most frequently become reinfected.

It is felt that active cases, regardless of stage, should have sanatorium care. Many of the chronic far advanced cases who continuously eject tubercle bacilli from cavities which will not heal and which cannot be closed artificially, undoubtedly should be isolated for life. Other cases, after necessary treatment, can be released on probation and followed by the local health department in coöperation with the sanatorium. Patients who receive initial pneumothorax at the sanatorium are able to leave much sooner if they are able to receive refills at or near home. If such a service could be made available through the health department clinic, it would release a number of much needed sanatorium beds for the use of other patients.

Mississippi has a good sanatorium, we all know. Its greatest inadequacy is lack of bed capacity to take care of needs. The 1944 American Medical Association registry lists only 425 beds. It has been conservatively estimated that the state should have about 3,000 sanatorium beds, allowing an adequate number of them for Negro patients. Because of the Negro's susceptibility to tuberculosis, three or four times as many are stricken as are white people. Additional beds for their isolation and treatment would prove an important aid in bringing these cases under control and in curbing the spread of the disease. No tuberculosis control program can be effective which fails to provide the necessary facilities for taking care of the total population, regardless of race or economic status. There is no question but that the whole problem of tuberculosis control is of sufficient economic and social importance to the state and its communities to justify whatever action may be necessary to obtain these facilities. To the newly established Division of Tuberculosis Control in the United States Public Health Service, we doubtless can look for much help along certain lines. But to make this assistance count for the most, we all have a job to do which calls for the fullest coöperation of the medical profession, public health workers, and the general public.

I again emphasize the necessity of periodic follow-up of all cases or suspected cases. An active registry should be kept and periodic reclassification made of cases as needed. Through such registry one should be able to get a picture at any time of the size and scope of the local tuberculosis problem. Finally, the health department should coöperate with other agencies in the rehabilitation of arrested cases of tuberculosis so that these people will be able to return to as nearly normal life as possible and become self-supporting.

PREVALENCE OF COMMUNICABLE DISEASES IN MISSISSIPPI

	Mar. 1945	Mar. 1944	Mar.-5 yr. avg.
Acute poliomyelitis	4	1	2.4
Bacillary dysentery	403	370	433.2
Dengue	0	0	0.0
Diphtheria	31	26	23.2
Influenza	5314	7060	7037.8
Measles	2289	3787	3678.6
Meningococcus meningitis	19	39	45.2
Other forms meningitis	3	18	6.8
Pellagra	157	186	210.8
Pneumonia	1917	2074	2092.2
Pulmonary tuberculosis	134	162	137.0
Scarlet fever	141	37	72.6
Smallpox	8	4	4.0
Tularemia	22	5	9.8
Typhoid fever	3	5	4.0
Typhus fever	12	7	6.0
Undulant fever	6	4	4.5
Whooping cough	815	1283	1054.6

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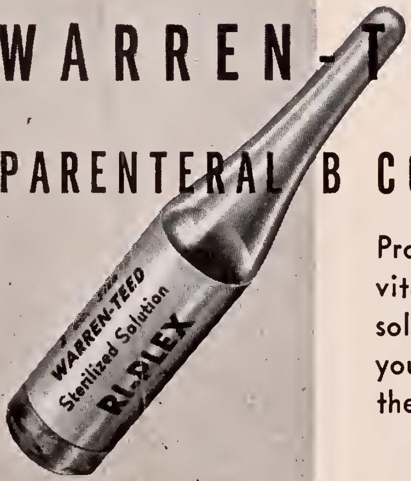

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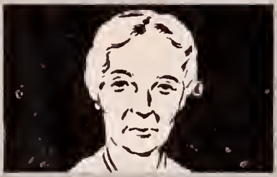

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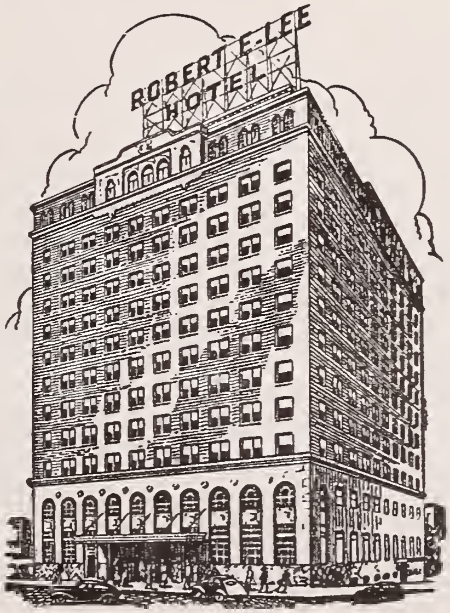

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